USDA United States Department of Agriculture

Natural Resources Conservation Service

Montana Water Supply Outlook Report March 1, 2009

Picture: Black Bear SNOTEL Site - Winter of 1997

Water Supply Outlook Report
and
Federal - State - Private
Cooperative Snow Surveys

For more water supply and resource management information, contact:

Water Supply Specialist
Federal Building
10 East Babcock, Room 443
Bozeman, MT 59715
or
Phone 406-587-6991

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

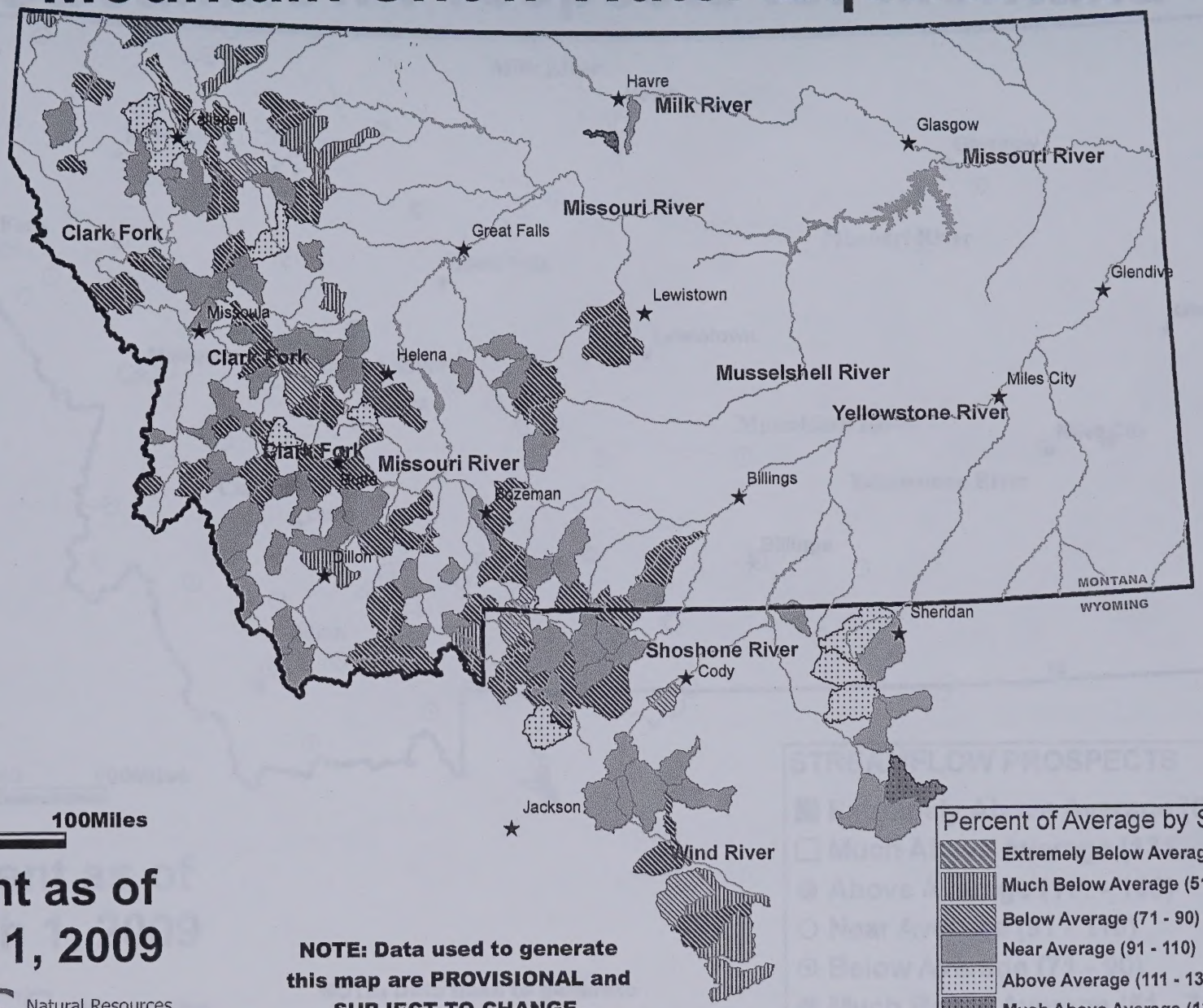
Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

UNITED STATES DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

Mountain Snow Water Equivalent



Current as of March 1, 2009

NRCS Natural Resources Conservation Service

http://www.mt.nrcs.usda.gov

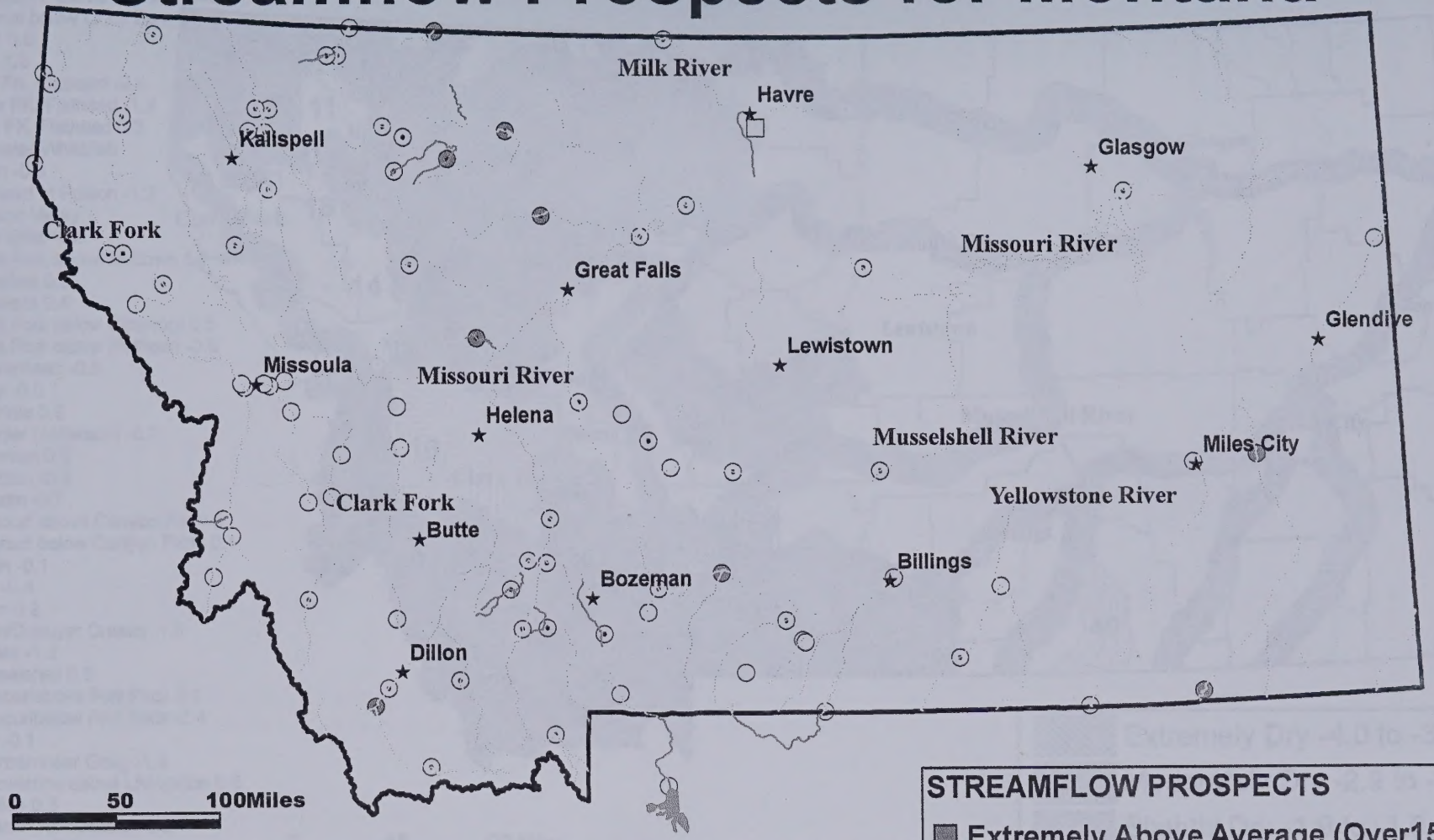
NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.

Mountain Snow Water Equivalent
March 1, 2008
Current as of

UNITED STATES DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

Streamflow Prospects for Montana



Current as of March 1, 2009

NRCS Natural Resources Conservation Service

http://www.mt.nrcs.usda.gov

NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.

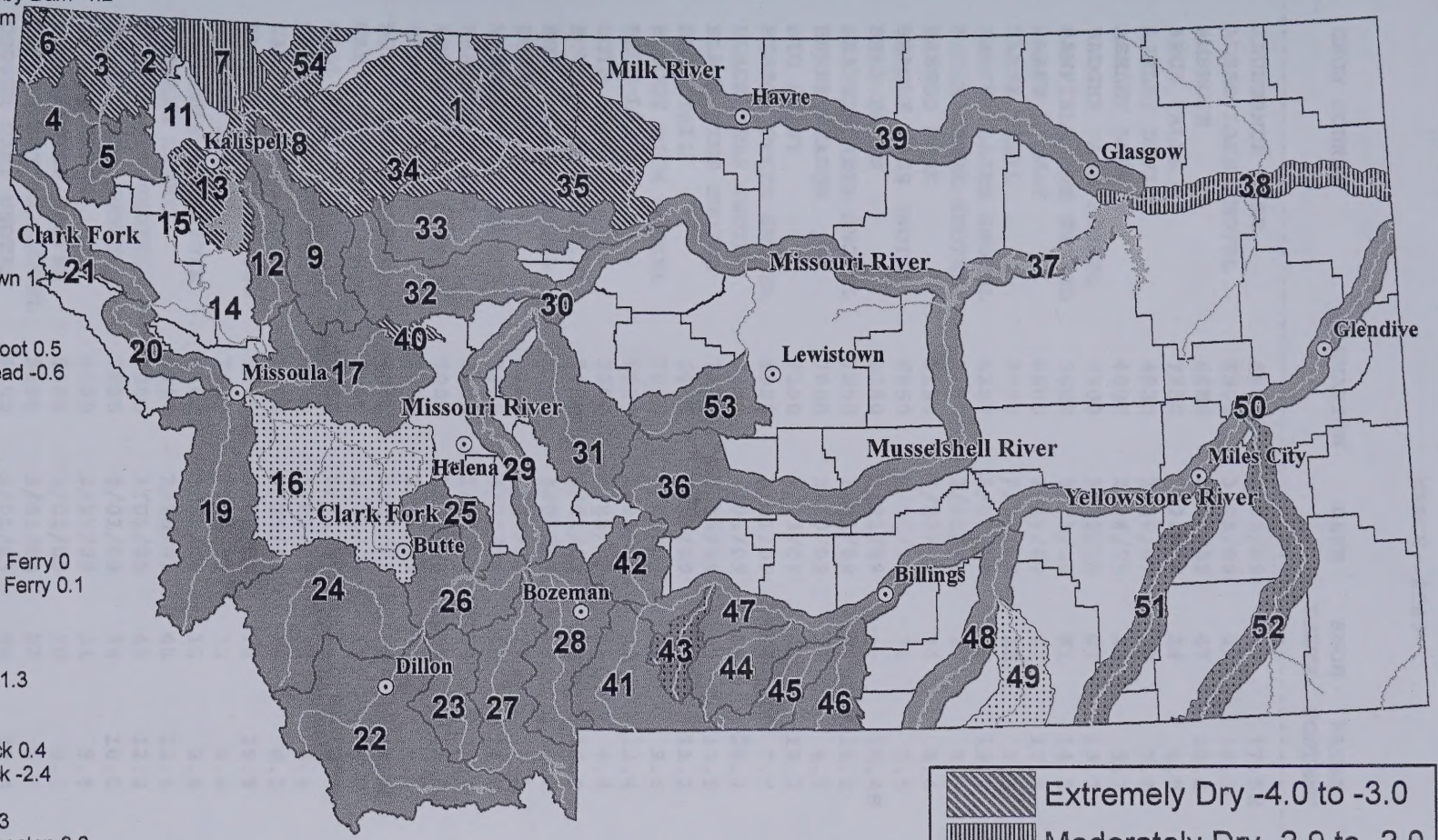
STREAMFLOW PROSPECTS

- Extremely Above Average (Over150)
- Much Above Average (131 - 150)
- Above Average (111 - 130)
- Near Average (91 - 110)
- Below Average (71 - 90)
- Much Below Average (51 - 70)
- Extremely Below Average (Below 51)

Streamflow Prospects for Montana

Surface Water Supply Index (SWSI) Values

UNITED STATES DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE



RIVER INDEX & SWSI VALUES
1 Marias above Tiber Reservoir -1.3
2 Tobacco -1.2
3 Kootenai Ft. Steele to Libby Dam -1.2
4 Kootenai below Libby Dam 0
5 Fisher 0.8
6 Yaak -1.5
7 North FK. Flathead -2.4
8 Middle FK. Flathead -1.2
9 South FK. Flathead 0.3
11 Stillwater/Whitefish
12 Swan -0.6
13 Flathead at Polson -1.2
14 Mission Valley
15 Little Bitterroot
16 Clark Fork above Milltown 1
17 Blackfoot 0.3
19 Bitterroot 0.4
20 Clark Fork below Bitterroot 0.5
21 Clark Fork below Flathead -0.6
22 Beaverhead -0.5
23 Ruby -0.5
24 Big Hole 0.8
25 Boulder (Jefferson) -0.2
26 Jefferson 0.9
27 Madison -0.9
28 Gallatin -0.7
29 Missouri above Canyon Ferry 0
30 Missouri below Canyon Ferry 0.1
31 Smith -0.1
32 Sun -0.4
33 Teton 0.2
34 Birch/Dupuyer Creeks -1.3
35 Marias -1.3
36 Musselshell 0.3
37 Missouriabove Fort Peck 0.4
38 Missouribelow Fort Peck -2.4
39 Milk -0.1
40 Dearbornnear Craig -1.3
41 Yellowstone above Livingston 0.6
42 Shields 0.3
43 Boulder(Yellowstone) 2.2
44 Stillwater -0.5
45 Rock/Red Lodge Creeks -0.7
46 Clarks Fork 0.7
47 Yellowstone above Bighorn 0.6
48 Bighorn below Bighorn Lake 0.3
49 Little Bighorn 1.1
50 Yellowstone below Bighorn 0.5
51 Tongue 2.4
52 Powder 2
53 Upper Judith River 0.8
54 Saint Mary River -1.1

0 45 90 Miles

Current as of March 1, 2009

- Extremely Dry -4.0 to -3.0
- Moderately Dry -2.9 to -2.0
- Slightly Dry -1.9 to -1.0
- Near Average -0.9 to 0.9
- Sightly Wet 1.0 to 1.9
- Moderately Wet 2.0 to 2.9
- Extremely Wet 3.0 to 4.0
- SWSI Not Applicable

NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.

NRCS Natural Resources Conservation Service

http://www.mt.nrcs.usda.gov

Surface Water Supply Index (SWSI) Values
Extremely Dry -4.0 to -5.0
Moderately Dry -2.0 to -3.0
Slightly Dry -1.0 to -1.9
Near Average -0.9 to 0.9
Slightly Wet 1.0 to 1.9
Moderately Wet 2.0 to 3.0
Extremely Wet 3.0 to 4.0
Not Applicable
Current as of
March 1, 2009
0
25
Miles
© NRCS

MONTANA SNOW COURSE AND SNOTEL DATA

MARCH 2009

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
ABUNDANCE LAKE	8800	3/01/09	---	17.5E	19.9	16.7
ALBRO LAKE SNOTEL	8300	3/01/09	49	14.3	14.4	16.5
AMBROSE	6480	2/26/09	47	10.8	11.9	10.5
ARCH FALLS	7350	2/24/09	26	6.0	8.5	9.0
ASHLEY DIVIDE	4820	2/26/09	29	7.0	8.3	6.2
ASHLEY LAKE	4000	2/26/09	25	5.7	6.6	5.3
BADGER PASS SNOTEL	6900	3/01/09	67	19.7	32.5	29.7
BANFIELD MTN SNOTEL	5600	3/01/09	51	14.2	18.6	17.0
BAREE MIDWAY	4600	2/23/09	51	17.9	38.3	28.7
BAREE TRAIL	3800	2/23/09	26	8.1	18.3	8.2
BARKER LAKES SNOTEL	8250	3/01/09	48	12.2	10.9	11.1
BASIN CREEK SNOTEL	7180	3/01/09	22	5.3	5.2	6.1
BASSOO PEAK	5150	2/23/09	26	8.4	13.4	9.0
BEAGLE SPGS SNOTEL	8850	3/01/09	31	7.5	8.6	7.0
BEAR BASIN	8150	3/01/09	---	16.4E	17.7	16.6
BEAVER CREEK SNOTEL	7850	3/01/09	53	14.8	16.8	14.5
BERRY MEADOW	7000	2/20/09	21	4.7	5.6	5.9
BIG SNOWY	7150	2/23/09	46	12.2	12.4	15.3
BISSON CREEK SNOTEL	4920	3/01/09	34	7.9	7.6	8.7
BLACK BEAR SNOTEL	7950	3/01/09	89	26.7	38.5	32.9
BLACK PINE SNOTEL	7100	3/01/09	40	10.9	10.9	10.1
BLACKTAIL	5650	2/25/09	40	11.2	13.7	12.3
BLOODY DICK SNOTEL	7550	3/01/09	37	9.6	11.1	10.6
BLUE LAKE	5900	2/23/09	40	12.4	21.2	21.1
BOTS SOTS	7750	2/25/09	18	4.4	--	6.2
BOULDER MTN SNOTEL	7950	3/01/09	58	16.9	17.7	16.6
BOX CANYON SNOTEL	6700	3/01/09	39	9.7	9.0	8.5
BOXELDER CREEK	5100	3/03/09	24	6.1	5.5	6.5
BRACKETT CR SNOTEL	7320	3/01/09	50	14.5	16.9	17.0
BRANHAM LAKES	8850	2/25/09	64	22.9	27.5	23.6
BRUSH CREEK TIMBER	5000	2/24/09	38	11.5	10.7	7.5
BULL MOUNTAIN	6600	2/27/09	18	4.8	4.7	5.1
BURNT MTN SNOTEL	5880	3/01/09	19	4.6	3.6	5.0
CABIN CREEK	5200	2/24/09	15	4.2	5.1	5.4
CALL ROAD	8050	3/01/09	---	8.5E	8.2	9.2
CALVERT CR SNOTEL	6430	3/01/09	23	6.6	8.8	7.5
CAMP SENIA	7890	2/25/09	26	6.2	--	4.6
CARROT BASIN SNOTEL	9000	3/01/09	72	19.9	26.2	22.6
CARTER CREEK	7400	3/02/09	11	2.4	4.5	4.2
CHESSMAN RESERVOIR	6200	2/23/09	12	2.6	3.6	3.1
CHICKEN CREEK	4060	2/25/09	41	12.5	19.5	14.4
CLOVER MDW SNOTEL	8800	3/01/09	49	12.2	13.6	14.2
COLE CREEK SNOTEL	7850	3/01/09	38	10.2	7.3	12.0
COLLEY CREEK	6300	2/27/09	31	5.6	7.4	7.0
COMBINATION SNOTEL	5600	3/01/09	20	4.2	6.0	4.5
COPPER BOTTOM SNOTEL	5200	3/01/09	27	6.6	9.0	9.9
COPPER CAMP SNOTEL	6950	3/01/09	96	35.0	46.5	--
COPPER CREEK	5700	2/23/09	25	8.6	10.7	12.5
COPPER MOUNTAIN	7700	2/24/09	31	8.0	7.5	8.9
COTTONWOOD CREEK	6400	2/25/09	18	4.5	4.9	6.0
COYOTE HILL	4200	2/25/09	28	9.2	10.0	9.1
CREVICE MOUNTAIN	8400	2/25/09	37	10.1	10.2	9.0
CRYSTAL LAKE SNOTEL	6050	3/01/09	36	9.1	9.3	9.6
DAD CREEK LAKE	8400	3/01/09	---	11.5E	12.8	11.2
DAISY PEAK SNOTEL	7600	3/01/09	27	6.5	6.4	8.7
DALY CREEK SNOTEL	5780	3/01/09	36	8.7	11.6	9.4
DARKHORSE LK. SNOTEL	8700	3/01/09	77	25.2	30.0	26.6
DAVIS CREEK	5400	2/25/09	49	13.6	22.8	20.7
DEADMAN CR SNOTEL	6450	3/01/09	31	8.4	9.2	8.5

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
DESERT MOUNTAIN	5600	2/23/09	62	10.1	13.9	12.6
DISCOVERY BASIN	7050	2/24/09	31	7.8	7.2	8.4
DIVIDE SNOTEL	7800	3/01/09	32	7.3	8.1	8.7
DIX HILL	6400	3/01/09	35	10.5	10.2	10.0
DUPUYER CREEK SNOTEL	5750	3/01/09	24	5.1	7.5	9.2
EAGLE CREEK	7000	2/28/09	46	13.4	9.7	--
EAST FORK R.S.	5400	2/23/09	20	5.4	5.9	5.6
EL DORADO MINE	7800	2/23/09	73	2.7	8.8	15.8
ELK HORN SPRINGS	7800	3/01/09	---	8.1E	8.8	7.6
ELK PEAK	8000	2/26/09	36	9.3	9.1	12.6
EMERY CREEK SNOTEL	4350	3/01/09	46	12.8	14.9	13.3
FATTY CREEK	5500	2/28/09	61	17.4	18.6	20.4
FISH CREEK	8000	2/27/09	30	7.3	7.6	7.8
FISHER CREEK SNOTEL	9100	3/01/09	96	28.9	35.6	29.6
FIVE-BULL	5700	2/25/09	16	4.4	6.4	5.3
FLATTOP MTN SNOTEL	6300	3/01/09	97	26.8	42.6	39.2
FLEECER RIDGE	7500	2/27/09	27	6.8	9.2	9.2
FOOLHEN	8280	3/01/09	---	13.5E	15.0	13.2
FOREST LAKE	6400	2/28/09	36	9.9	7.7	--
FOUR MILE	6900	2/24/09	17	4.0	6.9	6.8
FREIGHT CREEK	6000	2/24/09	25	6.4	14.5	12.6
FROHNER MDWS SNOTEL	6480	3/01/09	26	5.6	6.1	6.3
GARVER CREEK SNOTEL	4250	3/01/09	30	7.1	11.0	9.1
GOAT MOUNTAIN	7000	2/23/09	26	8.4	10.8	8.7
GRASSHOPPER	7000	2/25/09	19	4.5	3.8	4.7
GRAVE CRK SNOTEL	4300	3/01/09	38	11.4	16.5	14.5
GRIFFIN CR DIVIDE	5150	2/23/09	28	9.8	11.7	9.5
GUNSIGHT LAKE	6300	2/23/09	74	27.2	--	--
HAND CREEK SNOTEL	5030	3/01/09	42	11.8	11.4	9.9
HAWKINS LAKE SNOTEL	6450	3/01/09	54	15.3	24.1	23.1
HAYMAKER	8050	3/01/09	34	10.1	7.7	--
HEBGEN DAM	6550	2/24/09	27	9.2	8.7	10.8
HELL ROARING DIVIDE	5770	2/27/09	74	23.6	30.4	25.8
HERRIG JUNCTION	4850	2/23/09	54	17.2	25.6	22.2
HOLBROOK	4530	3/02/09	34	9.8	9.1	8.3
HOODOO BASIN SNOTEL	6050	3/01/09	92	29.0	43.0	38.6
INDEPENDENCE	7850	2/24/09	50	14.1	13.7	15.0
INTERGAARD	6450	2/23/09	17	3.6	4.2	6.2
JAHNKE LAKE TRAIL	7200	3/01/09	---	8.7E	8.7	9.0
JOHNSON PARK	6450	3/01/09	19	5.1	5.2	5.4
KISHENEHN	3890	2/28/09	26	6.6	10.2	7.3
KRAFT CREEK SNOTEL	4750	3/01/09	39	11.8	12.2	13.6
LAKE CREEK	6100	3/01/09	---	6.6E	7.5	7.4
LAKEVIEW CANYON	6930	2/25/09	27	7.2	10.5	8.5
LAKEVIEW RDG. SNOTEL	7400	3/01/09	32	7.8	9.9	9.2
LEMHI RIDGE SNOTEL	8100	3/01/09	35	9.2	9.2	8.7
LICK CREEK SNOTEL	6860	3/01/09	31	6.7	7.9	9.5
LITTLE PARK	7400	2/28/09	45	13.7	14.6	13.0
LOGAN CREEK	4300	2/24/09	24	7.2	14.1	6.2
LONE MOUNTAIN SNOTEL	8880	3/01/09	53	14.9	17.6	15.0
LOWER TWIN SNOTEL	7900	3/01/09	46	12.8	15.0	15.1
LUBRECHT SNOTEL	4680	3/01/09	18	5.2	5.2	5.3
LUBRECHT FOREST NO 3	5450	2/27/09	19	4.7	6.0	5.6
LUBRECHT FOREST NO 4	4650	2/27/09	11	2.8	2.4	2.7
LUBRECHT FOREST NO 6	4040	2/27/09	11	3.0	2.9	3.2
LUBRECHT HYDROPLOT	4200	2/26/09	17	4.1	5.1	5.1
MADISON PLT SNOTEL	7750	3/01/09	57	15.4	24.7	20.9
MANY GLACIER SNOTEL	4900	3/01/09	48	10.5	14.4	14.4
MARIAS PASS	5250	2/25/09	40	11.0	17.9	14.9
MIDDLE MILL CREEK	7850	2/25/09	36	11.1	14.3	13.3
MILL CREEK	7500	2/27/09	47	11.1	12.2	10.2
MINERAL CREEK	4000	2/25/09	45	10.8	19.4	15.8
MONUMENT PK SNOTEL	8850	3/01/09	68	19.1	20.2	17.2
MOSS PEAK SNOTEL	6780	3/01/09	93	27.0	27.2	31.3

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
MOULTON RESERVOIR	6850	2/27/09	27	4.8	6.4	6.2
MT LOCKHART SNOTEL	6400	3/01/09	58	13.7	20.7	17.6
MUDD LAKE	7650	3/01/09	---	14.3E	19.5	16.5
MULE CREEK SNOTEL	8300	3/01/09	47	13.5	13.9	13.1
N.E. ENTRANCE SNOTEL	7350	3/01/09	36	8.5	8.0	9.7
NEVADA RIDGE SNOTEL	7020	3/01/09	45	12.3	13.3	13.2
NEW WORLD	6900	3/01/09	---	8.4E	11.1	11.1
NEZ PERCE CMP SNOTEL	5650	3/01/09	42	11.5	13.7	12.7
NEZ PERCE PASS	6570	2/25/09	41	13.5	15.1	15.7
N.F. ELK CR SNOTEL	6250	3/01/09	35	9.2	8.9	10.2
NF JOCKO SNOTEL	6330	3/01/09	99	33.7	33.2	38.5
NOISY BASIN SNOTEL	6040	3/01/09	103	30.8	30.8	33.8
NOTCH	8500	3/01/09	---	10.7E	16.3	12.4
OPHIR PARK	7150	3/01/09	36	14.4	10.3	14.1
PETERSON MDW SNOTEL	7200	3/01/09	35	8.1	7.0	7.8
PICKET PIN LOWER	6200	2/24/09	1	.1	2.5	--
PICKET PIN MIDDLE	7250	2/24/09	25	5.6	7.0	--
PICKET PIN UPPER	8100	2/24/09	50	14.6	14.0	--
PICKFOOT CRK SNOTEL	6650	3/01/09	30	8.2	9.0	9.9
PIKE CREEK SNOTEL	5930	3/01/09	86	19.3	24.5	22.8
PIPESTONE PASS	7200	2/24/09	11	2.2	3.1	4.1
PLACER BASIN SNOTEL	8830	3/01/09	64	16.1	14.9	14.2
POORMAN CR SNOTEL	5100	3/01/09	81	26.4	38.0	28.2
PORCUPINE SNOTEL	6500	3/01/09	26	6.0	5.2	5.8
POTOMAGETON PARK	7150	3/01/09	46	12.5	13.3	12.1
REVAIS CREEK	4800	2/26/09	14	2.6	2.9	3.1
ROCK CREEK	5600	2/27/09	30	7.2	9.5	8.4
ROCK CREEK MEADOW	8160	2/25/09	58	16.7	19.4	16.6
ROCKER PEAK SNOTEL	8000	3/01/09	49	12.9	9.7	11.2
ROCKY BOY SNOTEL	4700	3/01/09	23	5.5	3.7	4.3
SACAJAWEA SNOTEL	6550	3/01/09	39	9.4	12.5	12.0
SADDLE MTN SNOTEL	7900	3/01/09	66	18.9	25.1	21.8
S.F. SHIELDS SNOTEL	8100	3/01/09	55	14.0	11.3	13.6
SHORT CREEK SNOTEL	7000	3/01/09	14	3.2	4.4	4.9
SHOWER FALLS SNOTEL	8100	3/01/09	68	18.0	18.9	17.4
SKALKAHO SNOTEL	7260	3/01/09	62	16.9	22.5	20.2
SLAG-A-MELT LAKE	8750	3/01/09	---	19.7E	19.0	20.5
SLEEPING WOMAN SNTL	6150	3/01/09	52	14.5	16.6	14.0
SLIDE ROCK MOUNTAIN	7100	2/24/09	34	10.1	11.7	12.6
SMUGGLER MINE	6960	2/25/09	20	4.7	9.2	8.1
SPOTTED BEAR MTN.	7000	2/25/09	42	12.0	13.8	12.7
SPUR PARK SNOTEL	8100	3/01/09	61	18.2	17.7	17.7
STAHL PEAK SNOTEL	6030	3/01/09	74	22.5	33.8	29.9
STEMPLE PASS	6600	2/23/09	30	9.1	8.5	8.3
STORM LAKE	7780	2/24/09	43	11.6	10.3	10.2
STRYKER BASIN	6180	2/25/09	66	21.4	31.3	26.9
STUART MOUNTAIN SNTL	7400	3/01/09	90	27.2	27.9	28.9
TAYLOR ROAD	4080	3/03/09	19	4.2	3.6	2.7
TEN MILE LOWER	6600	2/20/09	21	5.1	5.6	5.9
TEN MILE MIDDLE	6800	2/20/09	27	7.1	7.5	8.9
TEPEE CREEK SNOTEL	8000	3/01/09	40	10.1	13.9	10.7
TIMBERLINE CREEK	8850	2/25/09	40	11.1	--	11.0
TIZER BASIN SNOTEL	6840	3/01/09	27	7.1	7.0	7.9
TRAIL CREEK	7090	3/01/09	---	7.2E	7.4	7.0
TRINKUS LAKE	6100	2/28/09	101	32.3	34.6	36.4
TRUMAN CREEK	4060	2/26/09	23	5.7	6.4	4.4
TWELVEMILE SNOTEL	5600	3/01/09	51	16.3	21.1	16.0
TWENTY-ONE MILE	7150	2/24/09	40	12.0	17.2	14.3
TWIN CREEKS	3580	2/23/09	27	4.8	12.3	10.2
TWIN LAKES SNOTEL	6400	3/01/09	91	32.7	41.7	34.7
UPPER HOLLAND LAKE	6200	2/28/09	84	27.2	27.9	30.0
WALDRON SNOTEL	5600	3/01/09	31	7.7	10.5	9.7
WARM SPRINGS SNOTEL	7800	3/01/09	71	20.7	16.9	17.0
WEASEL DIVIDE	5450	3/02/09	62	21.9	28.4	28.7

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
WEST YELL'ST SNOTEL	6700	3/01/09	31	7.7	12.3	11.2
WHISKEY CREEK SNOTEL	6800	3/01/09	44	11.3	15.7	14.4
WHITE MILL SNOTEL	8700	3/01/09	68	19.2	22.9	20.3
WHITE PINE RIDGE	8850	3/01/09	---	4.7E	5.3	4.7
WILLOW CREEK	6500	2/23/09	20	4.6	4.4	6.3
WOOD CREEK SNOTEL	5960	3/01/09	31	7.9	8.6	8.2
WRONG CREEK	5700	2/25/09	34	8.2	12.2	11.0
WRONG RIDGE	6800	3/01/09	---	12.0E	16.7	15.4

Montana Water Supply Outlook Report as of March 1, 2009

State-wide snowpack slips to below average during February. February generally had scattered mountain snow showers and spring-like temperatures until the last week of the month where areas west of the divide and areas of north central Montana had significant snow water increases. February snow water gain in the Columbia River Basin was below average, Missouri River Basin was well below average, Saint Mary was below average, and the Yellowstone was below average.

Snowpack

On March 1, seasonal snowpack accumulation state-wide should be about 80 percent. West of the divide seasonal snowpack accumulation should be about 85 percent and east of the divide should be about 75 percent. There are normally about four to six weeks remaining until the seasonal snowpack peak is reached. State-wide mountain snow water content was 87 percent of average and 81 percent of last year at this time. West of the Continental Divide, snowpack was 85 percent of average and 77 percent of last year and east of the Continental Divide, snowpack was 90 percent of average and 88 percent of last year.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR	FEBRUARY % CHANGE
COLUMBIA	85	77	-5
KOOTENAI, MONTANA	78	118	-1
KOOTENAY, CANADA	74	67	-4
FLATHEAD, MONTANA	86	80	0
FLATHEAD, CANADA	65	55	+1
UPPER CLARK FORK	90	94	-12
BITTERROOT	91	78	-8
LOWER CLARK FORK	84	63	-5
MISSOURI	87	84	-8
MISSOURI HEADWATERS	89	84	-6
JEFFERSON	91	87	-10
MADISON	85	78	-3
GALLATIN	91	83	-3
MISSOURI MAINSTEM	84	85	-16
HEADWATERS MAINSTEM	97	100	-9
SMITH-JUDITH-MUSSELSHELL	91	100	-9
SUN-TETON-MARIAS	73	67	-5
MILK	104	92	--
BEARPAW MOUNTAINS	117	123	-14
CYPRESS HILLS, CANADA	88	71	--
ST. MARY	69	63	+4
ST. MARY & MILK	79	71	-17
YELLOWSTONE	95	97	-5
UPPER YELLOWSTONE	96	93	-6
LOWER YELLOWSTONE	94	101	-6
STATE-WIDE	87	81	-6

Precipitation

February mountain and valley precipitation across the state was 67 percent of average and 58 percent of last year, while the water year precipitation was 97 percent of average and 90 percent of last year. West of the Continental Divide, February mountain and valley precipitation was 67 percent of average and 92 percent of last year and the water year precipitation was 92 percent of average and 87 percent of last year. East of the Divide, February mountain and valley precipitation was 67 percent of average and 59 percent of last year and the water year precipitation was 101 percent of average and 94 percent of last year.

RIVER BASIN	FEBRUARY % OF AVERAGE	WATER YEAR % OF AVERAGE
COLUMBIA	67	92
KOOTENAI	60	78
FLATHEAD	81	88
UPPER CLARK FORK	61	107
BITTERROOT	51	100
LOWER CLARK FORK	69	90
MISSOURI	62	100
JEFFERSON	48	101
MADISON	68	91
GALLATIN	81	101
MISSOURI MAINSTEM	64	113
SMITH-JUDITH-MUSSELSHELL	62	106
SUN-TETON-MARIAS	70	88
MILK	51	138
ST. MARY	79	71
YELLOWSTONE	74	104
UPPER YELLOWSTONE	79	101
LOWER YELLOWSTONE	69	107
STATE-WIDE	67	97

Reservoirs

Major reservoir storages state-wide were 92 percent of average and 113 percent of last year. Reservoir storage west of the Continental Divide was 138 percent of average and 104 percent of last year. East of the Continental Divide, reservoir storages were 79 percent of average and 119 percent of last year.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
COLUMBIA	138	104
KOOTENAI	183	107
FLATHEAD	111	100
UPPER CLARK FORK	135	132
BITTERROOT	115	101
LOWER CLARK FORK	106	105
MISSOURI	78	119
JEFFERSON	87	118
MADISON	106	102
GALLATIN	144	102
MISSOURI MAINSTEM	75	119
SMITH-JUDITH-MUSSELSHELL	86	182
SUN-TETON-MARIAS	106	124
MILK	101	147
ST. MARY	162	211
YELLOWSTONE	115	111
UPPER YELLOWSTONE	105	103
LOWER YELLOWSTONE	116	111
STATE-WIDE	92	113

Streamflow

Streamflows across Montana are forecast to average 76 to 89 percent. West of the Continental Divide, streamflows are forecast to average 82 to 92 percent and east of the Continental Divide, streamflows are forecast to average 71 to 87 percent. Water users and water managers need to pay particular attention to local basins affecting their water supplies, as there are several localized areas where snowpack and streamflow forecasts are below average.

Below are averaged streamflow forecasts, by river basin, for the period April 1 through July 31. THESE FORECASTS ASSUME NEAR NORMAL SPRING CONDITIONS AND DO NOT ACCOUNT FOR WELL BELOW AVERAGE (70% or less) OR ABOVE AVERAGE (110% or more) SNOWMELT OR SPRING RAIN. Specific forecast probabilities are available in each individual River Basin Report on the Montana NRCS web page.

RIVER BASIN	April-July THIS YEAR % OF AVERAGE	April-July LAST YEAR % OF AVERAGE
COLUMBIA	82 to 92	91 to 101
KOOTENAI	74 to 82	97 to 105
FLATHEAD	81 to 91	93 to 100
UPPER CLARK FORK	85 to 99	82 to 96
BITTERROOT	85 to 93	97 to 105
LOWER CLARK FORK	83 to 89	97 to 103
MISSOURI	65 to 82	79 to 96
JEFFERSON	64 to 84	74 to 96
MADISON	76 to 83	104 to 112
GALLATIN	74 to 84	97 to 108
MISSOURI MAINSTEM	67 to 81	95 to 110
SMITH-JUDITH-MUSSELSHELL	65 to 86	49 to 66
SUN-TETON-MARIAS	57 to 74	87 to 104
MILK	68 to 93	67 to 94
ST. MARY	76 to 83	98 to 105
YELLOWSTONE	85 to 98	85 to 98
UPPER YELLOWSTONE	84 to 95	89 to 100
LOWER YELLOWSTONE	85 to 103	80 to 95
STATE-WIDE	76 to 89	85 to 98

NOTE: The *APRIL-JULY LAST YEAR % OF AVERAGE* column above is what was forecast March 1 last year, NOT what actually occurred.

Surface Water Supply Index

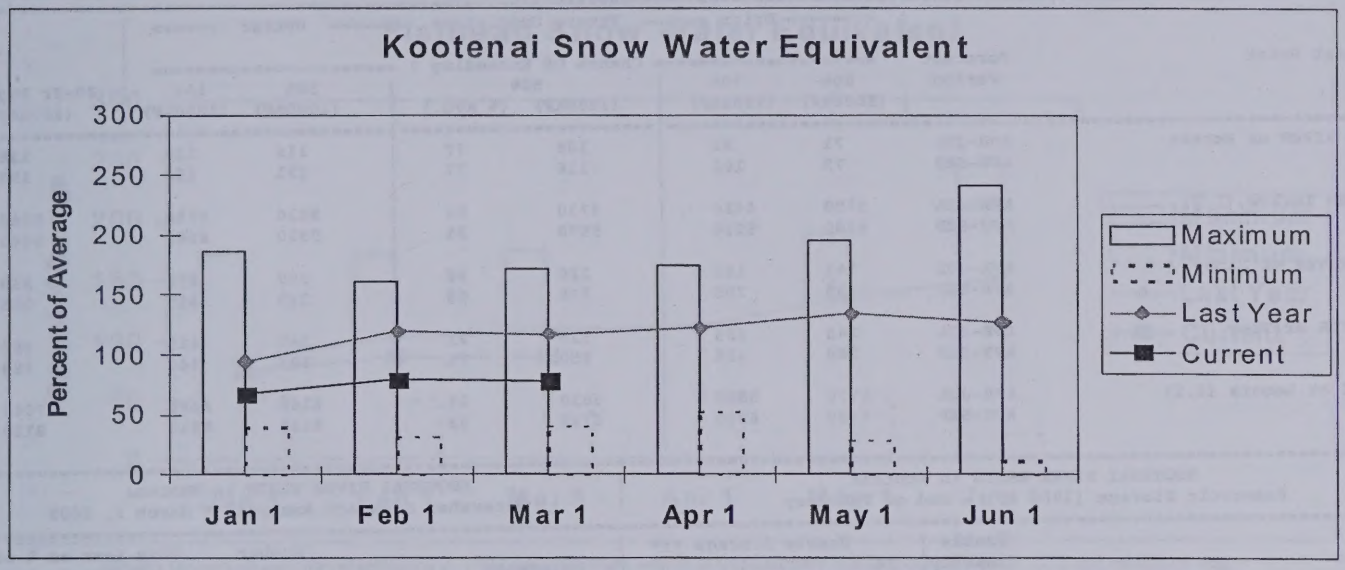
The Surface Water Supply Index (SWSI) is a measure of available surface water availability for the spring and summer months. Water users that rely on mountain precipitation can use the index to evaluate seasonal surface water supplies. The SWSI accounts for mountain snowpack, mountain precipitation, streamflow, reservoir storage, and soil moisture.

SWSI RATING	SURFACE WATER CONDITION
+3.0 to +4.0	Extremely Wet
+2.0 to +2.9	Moderately Wet
+1.0 to +1.9	Slightly Wet
-0.9 to +0.9	Near Average
-1.0 to -1.9	Slightly Dry
-2.0 to -2.9	Moderately Dry
-3.0 to -4.0	Extremely Dry

This year SWSI	Last year SWSI	Basin
-1.2	+1.5	Tobacco River
-1.2	+0.2	Kootenai Ft. Steele to Libby Dam
+0.7	+1.8	Kootenai River below Libby Dam
+0.8	+1.4	Fisher River
-1.5	+1.6	Yaak River
-2.4	+1.2	North Fork Flathead River
-1.2	+0.6	Middle FORK Flathead River
+0.3	+0.6	South Fork Flathead River
-1.0	+1.1	Flathead River at Columbia Falls
-0.6	-0.8	Swan River
-1.2	+0.6	Flathead River at Polson
----	-3.6	Mission Valley
----	+1.3	Little Bitterroot River
+1.1	+1.1	Clark Fork River above Milltown
+0.3	+0.1	Blackfoot River
+0.4	+1.7	Bitterroot River
+0.5	+0.9	Clark Fork River below Bitterroot River
-0.6	+0.7	Clark Fork River below Flathead River
-0.5	-0.1	Beaverhead River
-0.5	-0.7	Ruby River
+0.8	+0.7	Big Hole River
-0.2	-0.8	Boulder River (Jefferson)
+0.9	+1.3	Jefferson River
-0.9	+0.9	Madison River
-0.7	+1.5	Gallatin River
0.0	+0.6	Missouri River above Canyon Ferry
+0.1	+0.5	Missouri River below Canyon Ferry
-0.1	+0.5	Smith River
-0.4	+0.7	Sun River
+0.2	+1.1	Teton River
-1.3	-2.8	Birch/Dupuyer Creeks
+0.8	+0.8	Upper Judith River
-1.3	0.0	Marias River above Tiber
-1.3	0.0	Marias River below Tiber
+0.3	-0.8	Musselshell River
+0.4	-0.3	Missouri River above Ft. Peck
-2.4	-3.0	Missouri River below Ft. Peck
-1.1	+1.6	St. Mary River
-0.1	+0.6	Milk River
-1.3	+1.8	Dearborn River near Craig
+0.6	+1.7	Yellowstone River above Livingston
+0.3	-0.1	Shields River
+2.2	+2.0	Boulder River (Yellowstone)
-0.5	+0.5	Stillwater River
-0.7	-3.2	Rock/Red Lodge Creeks
+0.7	+2.1	Clarks Fork River
+0.6	+1.6	Yellowstone River above Bighorn River
+0.3	-0.2	Bighorn River below Bighorn Lake
+1.1	+0.3	Little Bighorn River
+0.5	+0.8	Yellowstone River below Bighorn River
+2.4	+2.3	Tongue River
+2.0	+1.7	Powder River

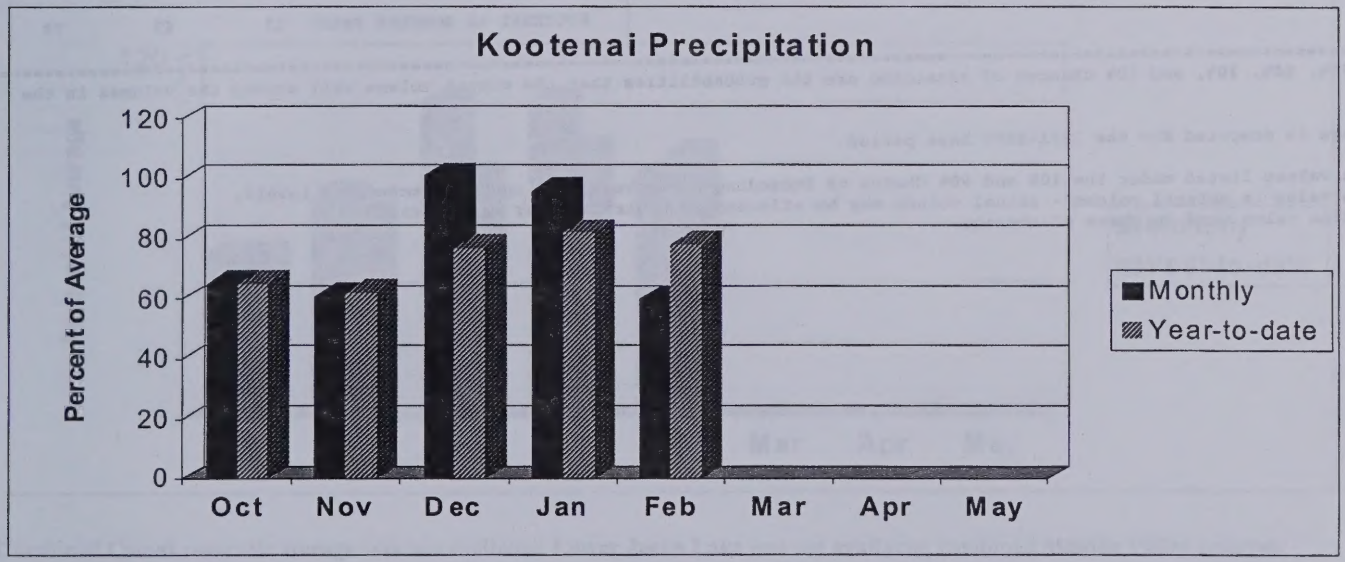
Kootenai River Basin in Montana

Snowpack conditions in the Kootenai River Basin were below average and decreased 1 percent from February 1. February seasonal snow water gain was 76 percent of average. Snow water content was 78 percent of average and 118 percent of last year. Snow water content in the Kootenay in Canada was 74 percent of average and 67 percent of last year and decreased 4 percent from February 1.



January maximum swe was established in 1997 and minimum was in 1977; February maximum swe was in 1997 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1974 and minimum swe was in 2001and 2005; May maximum swe was in 1974 and minimum swe was in 1977; and June maximum swe was in 1974 and minimum swe was in 1992. Average is for the period 1971 through 2000.

Mountain precipitation during February was 58 percent of average and 54 percent of last year. Valley precipitation during February was 82 percent of average and 111 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 78 percent of average and 71 percent of last year.



Lake Koocanusa storage was 183 percent of average and 107 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 74 percent to 82 percent.

Surface Water Supply Index (SWSI) was -1.2 in the Tobacco River; -1.2 in the Kootenai Ft. Steele to Libby Dam; +0.7 in the Kootenai River below Libby Dam; +0.8 in the Fisher River; and -1.5 in the Yaak River.

KOOTENAI RIVER BASIN in Montana
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
TOBACCO RIVER nr Eureka	APR-JUL	71	91	105	77	119	139	136
	APR-SEP	79	101	116	77	131	153	150
LIBBY RES Inflow (1,2)	APR-JUL	3780	4430	4730	84	5030	5680	5640
	APR-SEP	4480	5230	5570	84	5910	6660	6640
FISHER RIVER nr Libby	APR-JUL	143	189	220	96	250	295	230
	APR-SEP	155	205	235	96	265	315	245
YAAK RIVER nr Troy	APR-JUL	245	295	330	71	365	415	465
	APR-SEP	260	315	350	71	385	440	490
KOOTENAI at Leonia (1,2)	APR-JUL	4770	5500	5830	83	6160	6890	7040
	APR-SEP	5450	6330	6730	83	7130	8010	8120

KOOTENAI RIVER BASIN in Montana
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LAKE KOOCANUSA	5748.0	3574.0	3347.0	1950.0

KOOTENAI RIVER BASIN in Montana
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
KOOTENAY in CANADA	4	67	74
KOOTENAI MAINTSTEM	3	69	79
TOBACCO	3	71	76
FISHER	4	63	91
YAAK	3	62	68
KOOTENAI in MONTANA	13	67	78
KOOTENAI ab BONNERS FERRY	17	67	78

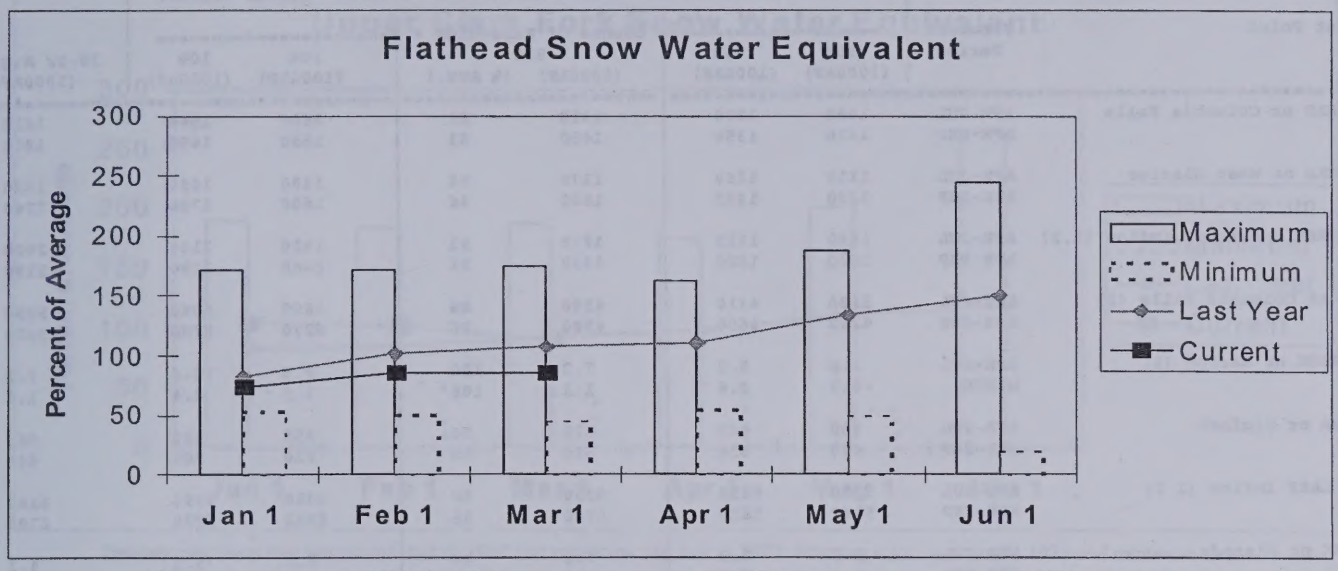
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

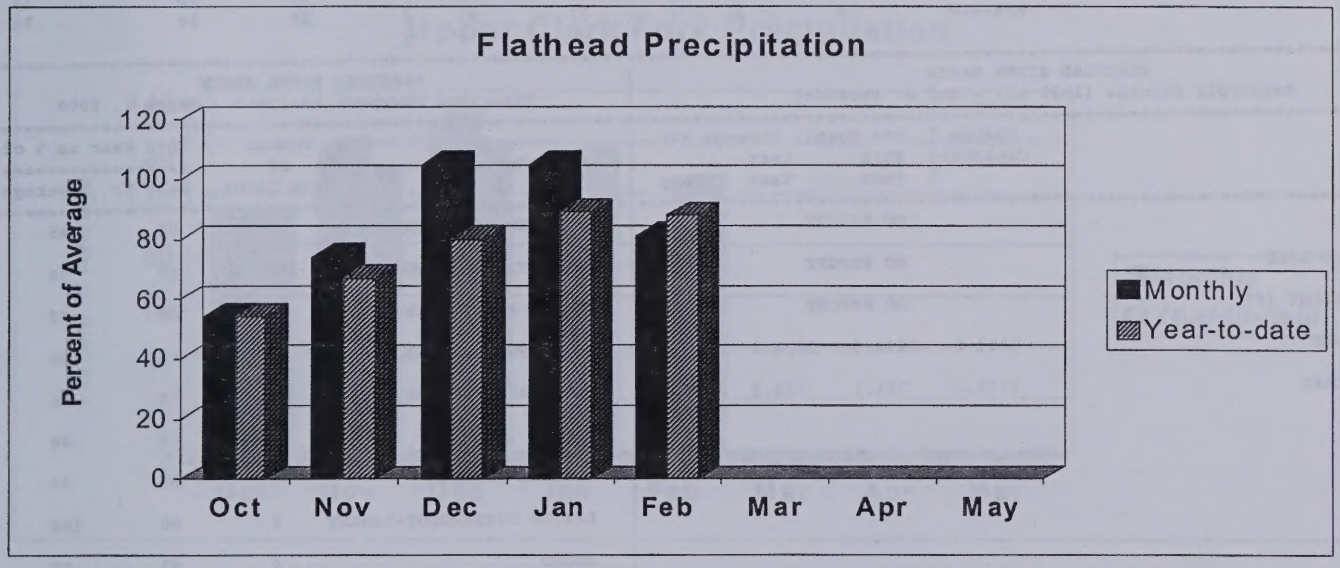
Flathead River Basin

Snowpack conditions in the Flathead River Basin were below average and the same as February 1. February seasonal snow water gain was 88 percent of average. Snow water content was 86 percent of average and 80 percent of last year. Snow water content in the North Fork Flathead River in Canada was 65 percent of average and 55 percent of last year and increased 1 percent from February 1.



January maximum swe was established in 1997 and minimum was in 2001; February maximum swe was in 1972 and minimum was in 2001; March maximum swe was in 1972 and minimum was in 2005; April maximum swe was in 1972 and minimum was in 2005; May maximum swe was in 1972 and minimum was in 1992; and June maximum swe was in 1974 and minimum was in 1992. Average is for the period 1971 through 2000.

Mountain precipitation during February was 80 percent of average and 68 percent of last year. Valley precipitation during February was 91 percent of average and 144 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 88 percent of average and 87 percent of last year.



Combined Camas reservoir storage was not available; Lower Jocko Lake was not available; combined Mission Valley reservoir storage was not available; Hungry Horse storage was 119 percent of average and 100 percent of last year; and Flathead Lake storage was 90 percent of average and 100 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 81 percent to 91 percent.

Surface Water Supply Index (SWSI) was -2.4 in the North Fork Flathead River; -1.2 in the Middle Fork Flathead River; +0.3 in the South Fork Flathead River; -1.4 in the Flathead River at Columbia Falls; -0.6 in the Swan River; -1.2 in the Flathead River at Polson; not available in the Mission Valley; and not available in the Little Bitterroot River.

FLATHEAD RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
NF FLATHEAD nr Columbia Falls	APR-JUL	1080	1220	1310	81	1400	1540	1620
	APR-SEP	1210	1350	1450	81	1550	1690	1800
MF FLATHEAD nr West Glacier	APR-JUL	1110	1260	1370	86	1480	1630	1590
	APR-SEP	1250	1400	1500	86	1600	1750	1740
HUNGRY HORSE Reservoir Inflow (1,2)	APR-JUL	1480	1710	1810	91	1910	2140	2000
	APR-SEP	1570	1820	1930	91	2040	2290	2120
FLATHEAD at Columbia Falls (2)	APR-JUL	3920	4310	4580	86	4850	5240	5350
	APR-SEP	4260	4690	4980	86	5270	5700	5820
ASHLEY CREEK nr Marion (2)	APR-JUL	1.8	5.0	7.2	100	9.4	12.6	7.2
	MARCH	-0.2	0.6	1.1	108	1.7	2.4	1.1
SWAN RIVER nr Bigfork	APR-JUL	400	465	510	90	555	620	565
	APR-SEP	460	530	580	90	630	700	645
FLATHEAD LAKE Inflow (1,2)	APR-JUL	5070	5250	5330	86	5410	5590	6180
	APR-SEP	5240	5610	5780	86	5950	6320	6700
MILL CREEK nr Niarada	APR-JUL	2.0	2.9	3.6	88	4.3	5.2	4.1
	APR-SEP	2.2	3.2	3.9	88	4.6	5.6	4.5
SOUTH CROW CREEK nr Ronan	APR-JUL	6.6	8.1	9.1	90	10.1	11.6	10.1
	APR-SEP	7.7	9.3	10.4	90	11.5	13.1	11.5
MISSION CREEK nr St Ignatius	APR-JUL	20	23	25	99	27	30	25
	APR-SEP	24	28	30	99	32	36	30
SOUTH FORK JOCKO RV nr Arlee	APR-JUL	17.4	25	30	99	35	43	30
	APR-SEP	21	29	34	100	39	47	34
NF JOCKO RV blw Tabor Feeder Canal	APR-JUL	25	28	30	96	32	35	31
	APR-SEP	28	31	33	97	35	38	34

FLATHEAD RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CAMAS (4)		NO REPORT		
LOWER JOCKO LAKE		NO REPORT		
MISSION VALLEY (8)		NO REPORT		
HUNGRY HORSE	3451.0	2444.0	2434.0	2047.6
FLATHEAD LAKE	1791.0	724.1	725.3	802.7

FLATHEAD RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
NF FLATHEAD in CANADA	3	55	65
NF FLATHEAD in MONTANA	9	68	76
MIDDLE FORK FLATHEAD	6	68	75
SOUTH FORK FLATHEAD	7	90	90
STILLWATER-WHITEFISH	10	75	95
SWAN	7	98	88
MISSION VALLEY	4	95	87
LITTLE BITTERROOT-ASHLEY	6	80	102
JOCKO	4	97	92
FLATHEAD in MONTANA	39	80	86
FLATHEAD RIVER BASIN	42	78	84

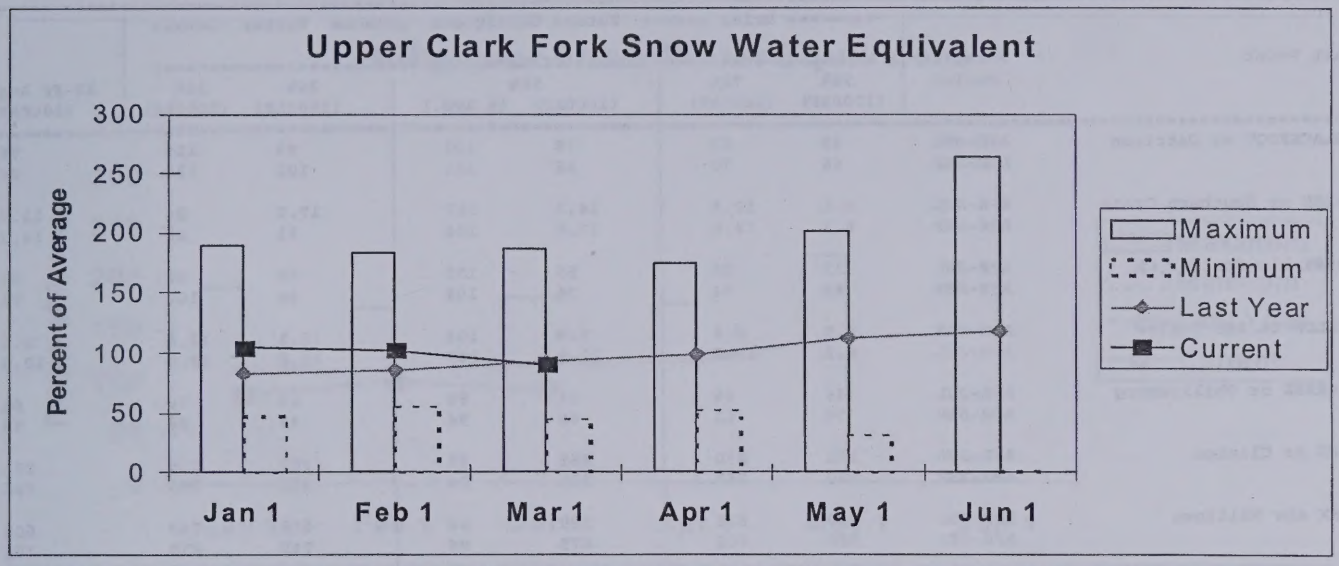
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

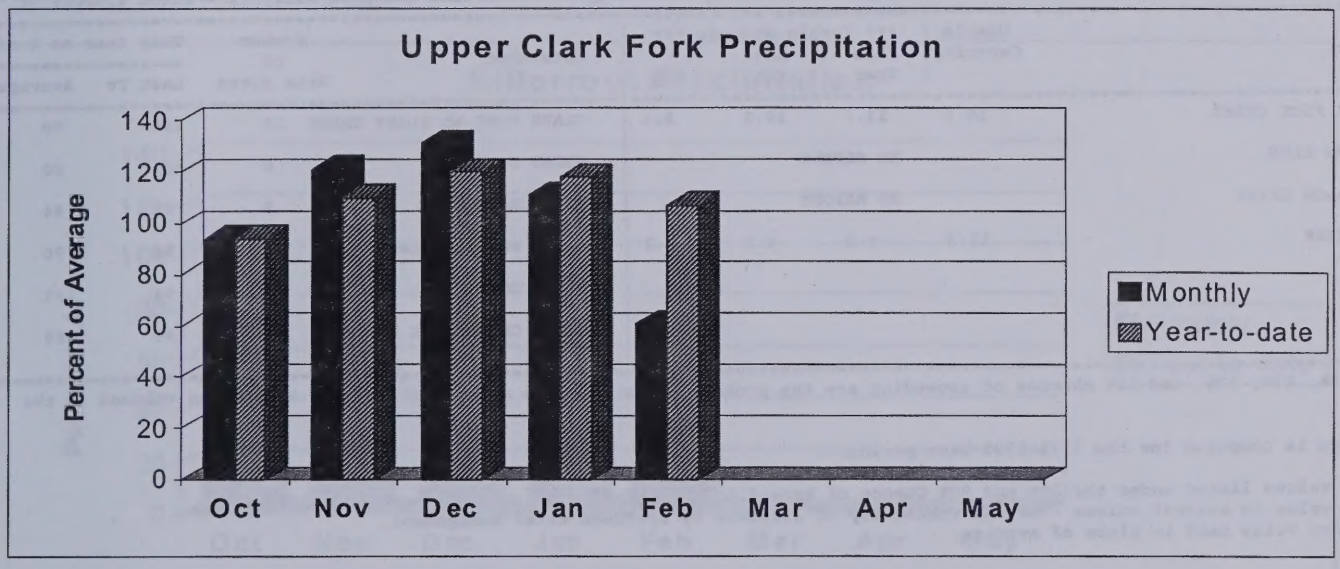
Upper Clark Fork River Basin

Snowpack conditions in the Upper Clark Fork River Basin were below average and decreased 12 percent from February 1. February seasonal snow water gain was 71 percent of average. Snow water content was 90 percent of average and 94 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 2005; April maximum swe was in 1972 and minimum was in 2005; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum swe was in 1975 and minimum swe was in 1987. Average is for the period 1971 through 2000.

Mountain precipitation during February was 61 percent of average and 48 percent of last year. Valley precipitation during February was 60 percent of average and 39 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 107 percent of average and 106 percent of last year.



East Fork Rock Creek was 122 percent of average and 113 percent of last year; Georgetown Lake was not available; Lower Willow Creek storage was not available; and Nevada Creek storage was 158 percent of average and 174 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 85 percent to 99 percent.

Surface Water Supply Index (SWSI) was +1.1 in the Clark Fork River above Milltown; +0.3 in the Blackfoot River; and +0.6 in the Clark Fork River above Missoula.

UPPER CLARK FORK RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
LITTLE BLACKFOOT nr Garrison	APR-JUL	40	63	78	103	93	116	76
	APR-SEP	46	70	86	102	102	126	84
FLINT CREEK nr Southern Cross	APR-JUL	9.1	12.4	14.7	107	17.0	20	13.7
	APR-SEP	8.7	13.8	17.2	106	21	26	16.2
FLINT CREEK blw Boulder Ck	APR-JUL	37	50	59	105	68	81	56
	APR-SEP	48	64	74	104	84	100	71
LOWER WILLOW CK RES Inflow	APR-MAY	4.5	6.9	8.5	104	10.1	12.5	8.2
	APR-JUL	6.2	10.2	12.9	103	15.6	19.6	12.5
MF ROCK CREEK nr Philipsburg	APR-JUL	44	54	61	95	68	78	64
	APR-SEP	50	61	68	94	75	86	72
ROCK CREEK nr Clinton	APR-JUL	182	230	265	98	300	350	270
	APR-SEP	210	265	300	98	335	390	305
CLARK FORK abv Milltown	APR-JUL	420	515	580	96	645	740	605
	APR-SEP	500	605	675	96	745	850	705
NEVADA CREEK nr Helmville	APR-MAY	5.6	8.1	9.8	95	11.5	14.0	10.3
	APR-JUL	9.6	13.6	16.4	95	19.2	23	17.3
BLACKFOOT RIVER nr Bonner	APR-JUL	575	695	775	96	855	975	805
	APR-SEP	640	770	855	96	940	1070	890
CLARK FORK abv Missoula	APR-JUL	1100	1240	1340	95	1440	1580	1410
	APR-SEP	1250	1410	1520	95	1630	1790	1600

UPPER CLARK FORK RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
EAST FORK ROCK CREEK	15.6	11.5	10.2	9.4
GEORGETOWN LAKE		NO REPORT		
LOWER WILLOW CREEK		NO REPORT		
NEVADA CREEK	12.6	8.2	4.7	5.2

UPPER CLARK FORK RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CLARK FORK ab FLINT CREEK	13	103	90
FLINT CREEK	6	101	98
ROCK CREEK	5	91	94
CLARK FORK ab BLACKFOOT	21	96	90
BLACKFOOT	15	93	91
UPPER CLARK FORK BASIN	34	94	90

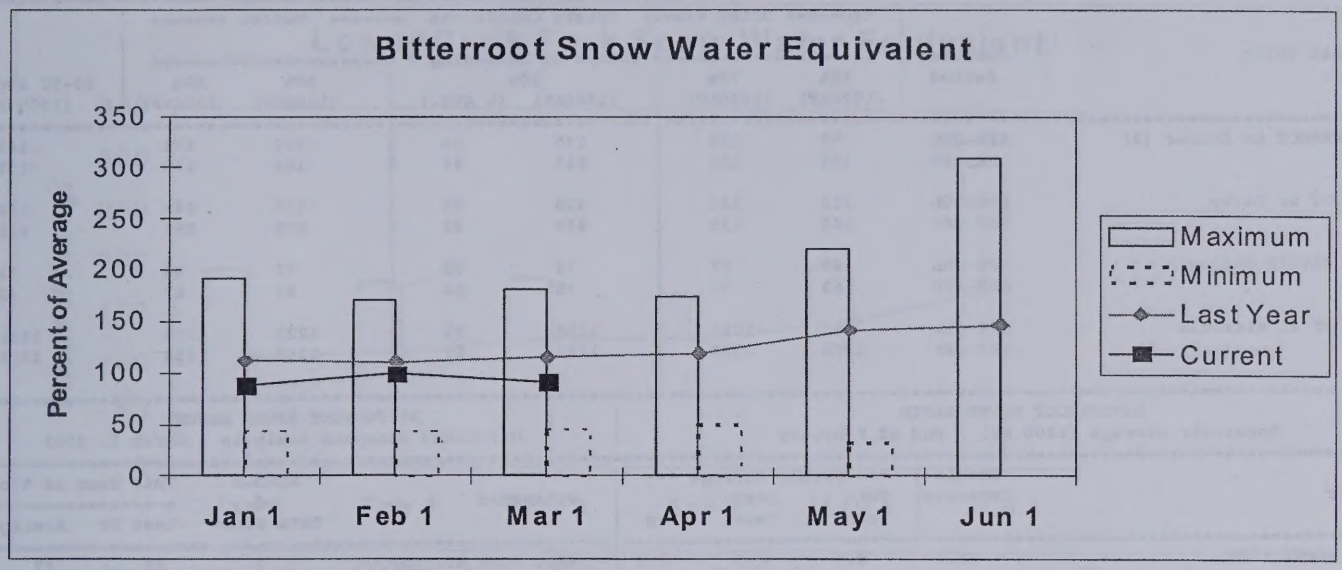
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

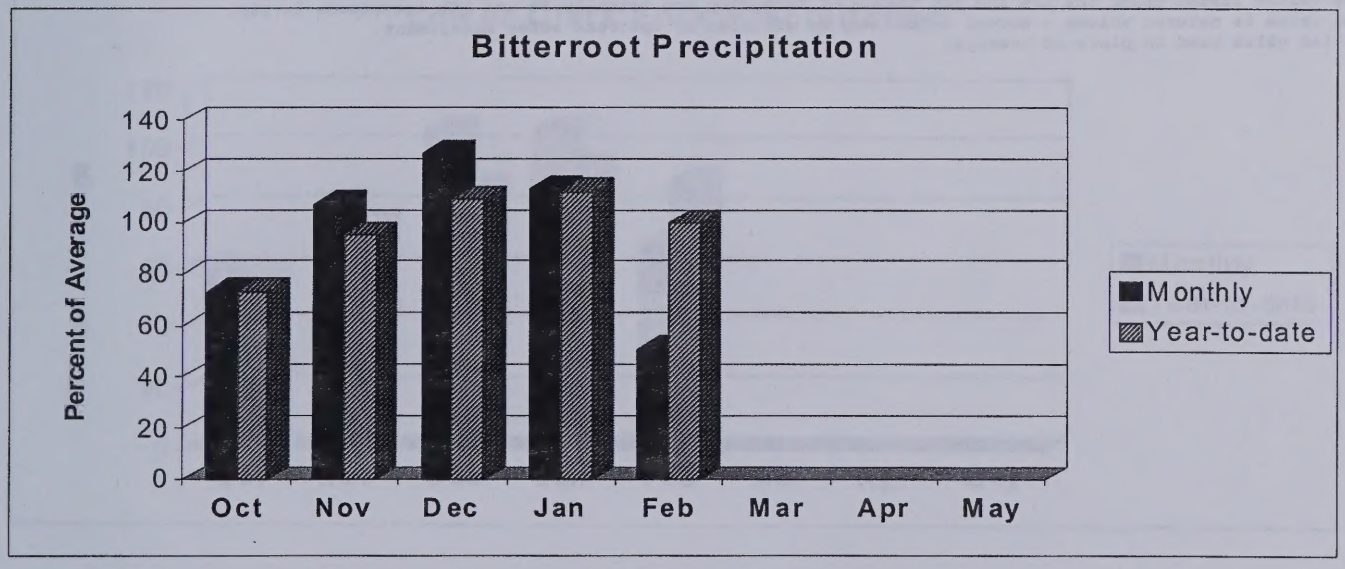
Bitterroot River Basin

Snowpack conditions in the Bitterroot River Basin were slightly below average and decreased 8 percent from February 1. February seasonal snow water gain was 56 percent of average. Snow water content was 91 percent of average and 78 percent of last year.



January maximum swe was established in 1997 and minimum swe in 1977; February maximum swe was in 1972 and minimum was in 1977; March maximum swe was in 1972 and minimum swe was in 1977 and 2005; April maximum swe was in 1972 and minimum swe was in 2005; May maximum swe was in 1972 and minimum swe was in 1987; and June maximum swe was 1972 and 1974 and minimum swe was in 1987,1992, 1994, and 2001. Average is for the period 1971 through 2000.

Mountain precipitation during February was 50 percent of average and 38 percent of last year. Valley precipitation during February was 65 percent of average and 58 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 100 percent of average and 87 percent of last year.



Painted Rocks Lake storage was 127 percent of average and 101 percent of last year and Como storage was 108 percent of average and 102 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 85 percent to 93 percent.

Surface Water Supply Index (SWSI) was +0.4 in the Bitterroot River.

BITTERROOT RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WF BITTERROOT nr Conner (2)	APR-JUL	97	120	135	94	150	173	143
	APR-SEP	104	130	147	94	164	190	157
BITTERROOT nr Darby	APR-JUL	315	385	430	94	475	545	460
	APR-SEP	365	435	480	93	525	595	515
COMO RESERVOIR Inflow	APR-JUL	60	67	72	92	77	84	78
	APR-SEP	63	70	75	92	80	87	82
BITTERROOT at Missoula	APR-JUL	985	1080	1150	92	1220	1320	1250
	APR-SEP	1070	1180	1260	92	1340	1450	1370

BITTERROOT RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
PAINTED ROCKS LAKE	31.7	8.9	8.8	7.0
COMO	34.9	13.4	13.2	12.4

BITTERROOT RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WEST FORK BITTERROOT	3	81	87
EAST SIDE BITTERROOT	5	79	90
WEST SIDE BITTERROOT	3	76	92
BITTERROOT RIVER BASIN	10	78	91

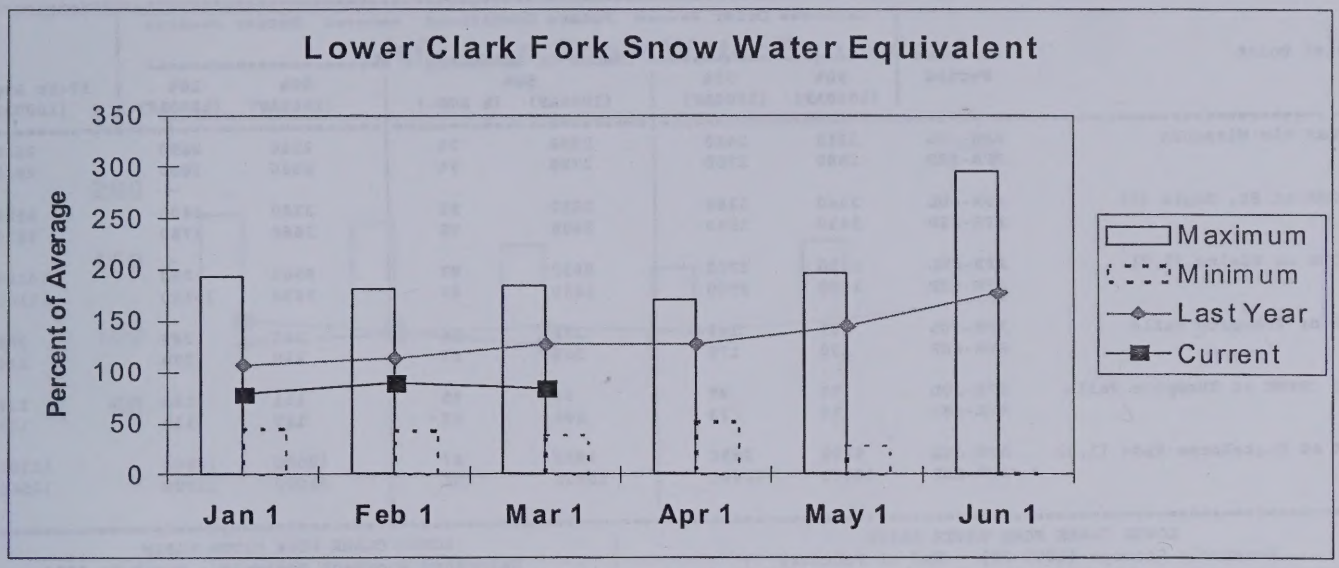
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

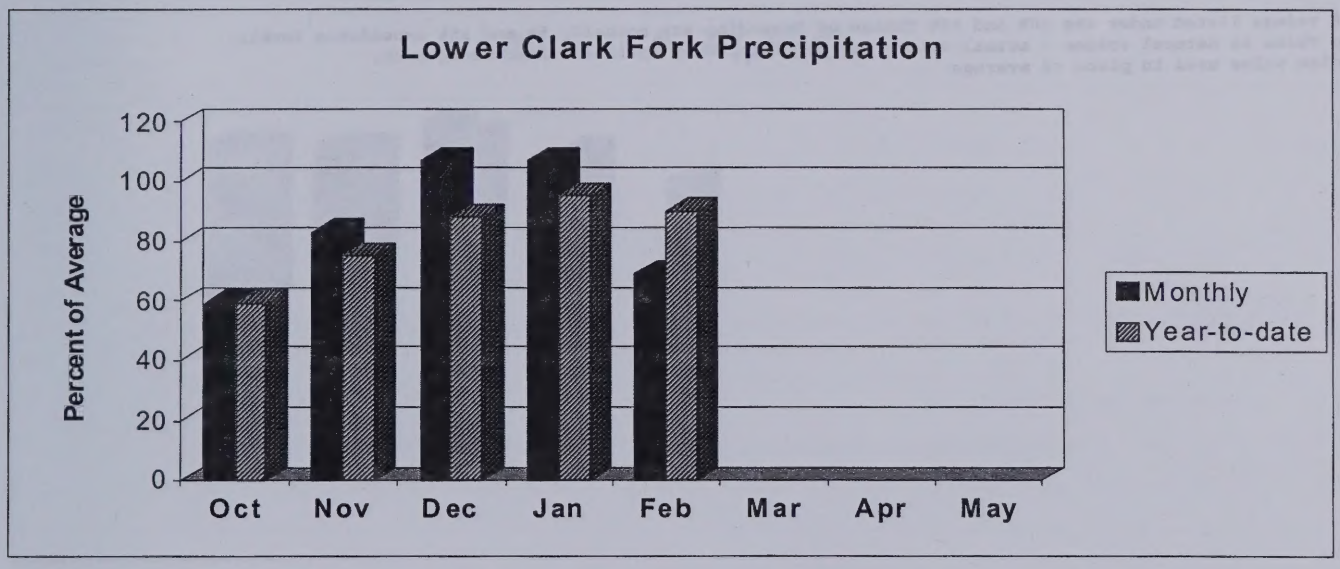
Lower Clark Fork River Basin

Snowpack conditions in the Lower Clark Fork River Basin were below average and decreased 5 percent from February 1. February seasonal snow water gain was 74 percent of average. Snow water content was 84 percent of average and 63 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum was in 2005; April maximum swe was in 1972 and minimum swe was in 2005; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum swe was in 1974 and minimum swe was in 1977. Average is for the period 1971 through 2000.

Mountain precipitation during February was 65 percent of average and 55 percent of last year. Valley precipitation during February was 94 percent of average and 93 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 90 percent of average and 78 percent of last year.



Noxon Rapids storage was 106 percent of average and 105 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 83 percent to 89 percent.

Surface Water Supply Index (SWSI) was +0.5 in the Clark Fork River below Bitterroot River and -0.6 in the Clark Fork River below Flathead River.

LOWER CLARK FORK RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CLARK FORK blw Missoula	APR-JUL	2310	2420	2500	94	2580	2690	2660
	APR-SEP	2580	2700	2790	94	2880	3000	2960
CLARK FORK at St. Regis (1)	APR-JUL	3060	3180	3230	92	3280	3400	3520
	APR-SEP	3420	3540	3600	92	3660	3780	3910
CLARK FORK nr Plains (1,2)	APR-JUL	8410	8700	8830	87	8960	9250	10100
	APR-SEP	9240	9550	9690	87	9830	10100	11100
THOMPSON nr Thompson Falls	APR-JUL	109	149	176	86	205	245	205
	APR-SEP	130	172	200	87	230	270	230
PROSPECT CREEK at Thompson Falls	APR-JUL	70	87	99	85	111	128	116
	APR-SEP	75	93	105	85	117	135	124
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	9200	9630	9830	87	10000	10500	11300
	APR-SEP	10000	10600	10800	86	11000	11600	12500

LOWER CLARK FORK RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
NOXON RAPIDS	335.0	325.7	309.2	306.0

LOWER CLARK FORK RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LOWER CLARK FORK BASIN	11	63	84

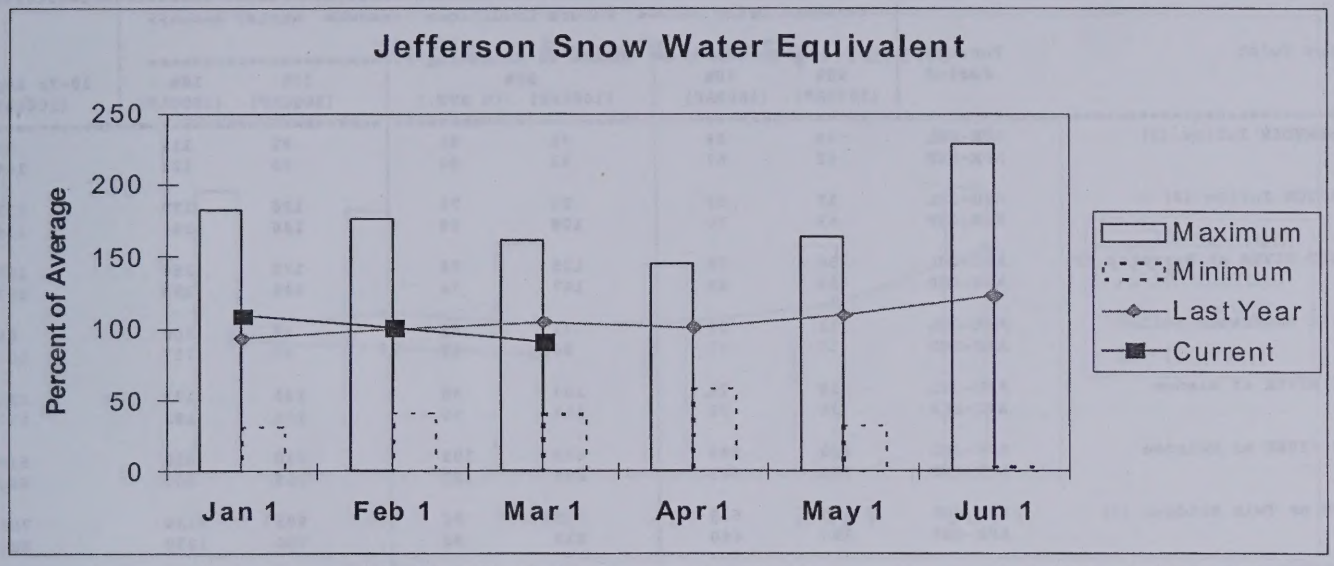
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

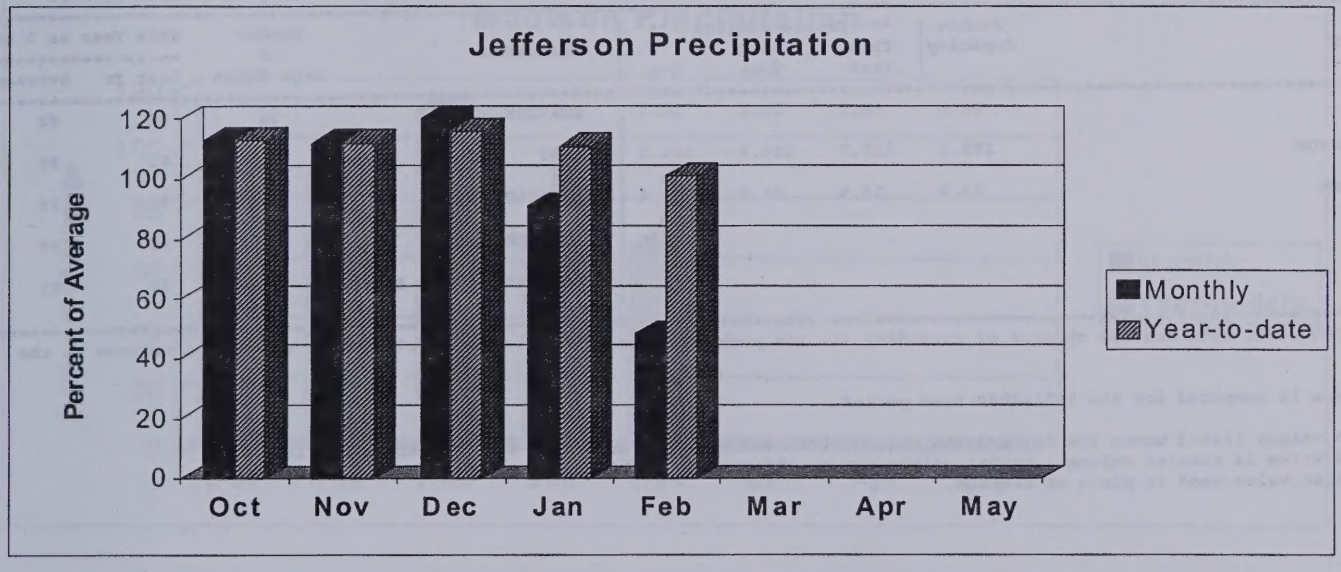
Jefferson River Basin

Snowpack conditions in the Jefferson River Basin were slightly below average and decreased 10 percent from February 1. February seasonal snow water gain was 44 percent of average. Snow water content was 91 percent of average and 87 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1997 and minimum was in 1977; March maximum swe was in 1972 and minimum was in 1977; April maximum swe was in 1997 and minimum was in 1977; May maximum swe was in 1975 and minimum swe was in 1977; and June maximum swe was in 1982 and minimum in 1987. Average is for the period 1971 through 2000.

Mountain precipitation during February was 48 percent of average and 44 percent of last year. Valley precipitation during February was 42 percent of average and 24 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 101 percent of average and 89 percent of last year.



Lima storage was 98 percent of average and 170 percent of last year; Clark Canyon storage was 82 percent of average and 110 percent of last year; and Ruby River storage was 104 percent of average and 110 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 64 percent to 84 percent.

Surface Water Supply Index (SWSI) was -0.5 in the Beaverhead River; -0.5 in the Ruby River; +0.8 in the Big Hole River; -0.2 in the Boulder River; and +0.9 in the Jefferson River as a whole.

JEFFERSON RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
LIMA RESERVOIR Inflow (2)	APR-JUL	44	64	78	81	92	112	96
	APR-SEP	42	67	83	80	99	124	104
CLARK CANYON Inflow (2)	APR-JUL	37	58	92	70	126	177	131
	APR-SEP	43	70	108	69	146	200	156
BEAVERHEAD RIVER at Barretts (2)	APR-JUL	50	75	125	74	175	250	168
	APR-SEP	59	89	147	74	205	290	200
RUBY RIVER Reservoir Inflow	APR-JUL	42	59	71	85	83	100	84
	APR-SEP	51	71	84	83	97	117	101
BIG HOLE RIVER at Wisdom	APR-JUL	30	74	104	86	134	178	121
	APR-SEP	30	78	111	85	144	192	130
BIG HOLE RIVER nr Melrose	APR-JUL	420	540	625	103	710	830	610
	APR-SEP	450	585	675	102	765	900	660
JEFFERSON nr Twin Bridges (2)	APR-JUL	380	605	755	96	905	1130	785
	APR-SEP	390	640	810	92	980	1230	880
BOULDER RIVER nr Boulder	APR-JUL	35	52	63	81	74	91	78
	APR-SEP	38	56	68	80	80	98	85
WILLOW CREEK Reservoir Inflow	APR-JUL	5.5	11.6	15.8	88	20	26	17.9
	APR-SEP	6.8	13.2	17.6	88	22	28	20
JEFFERSON RIVER nr Three Forks (2)	APR-JUL	280	535	705	90	875	1130	780
	APR-SEP	290	570	760	88	950	1230	860

JEFFERSON RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LIMA	84.0	35.1	20.6	35.7
CLARK CANYON	255.6	117.7	106.8	144.2
RUBY RIVER	38.8	28.5	26.0	27.4

JEFFERSON RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BEAVERHEAD	16	84	92
RUBY	11	81	85
BIGHOLE	18	89	95
BOULDER	8	99	88
JEFFERSON RIVER BASIN	44	87	91

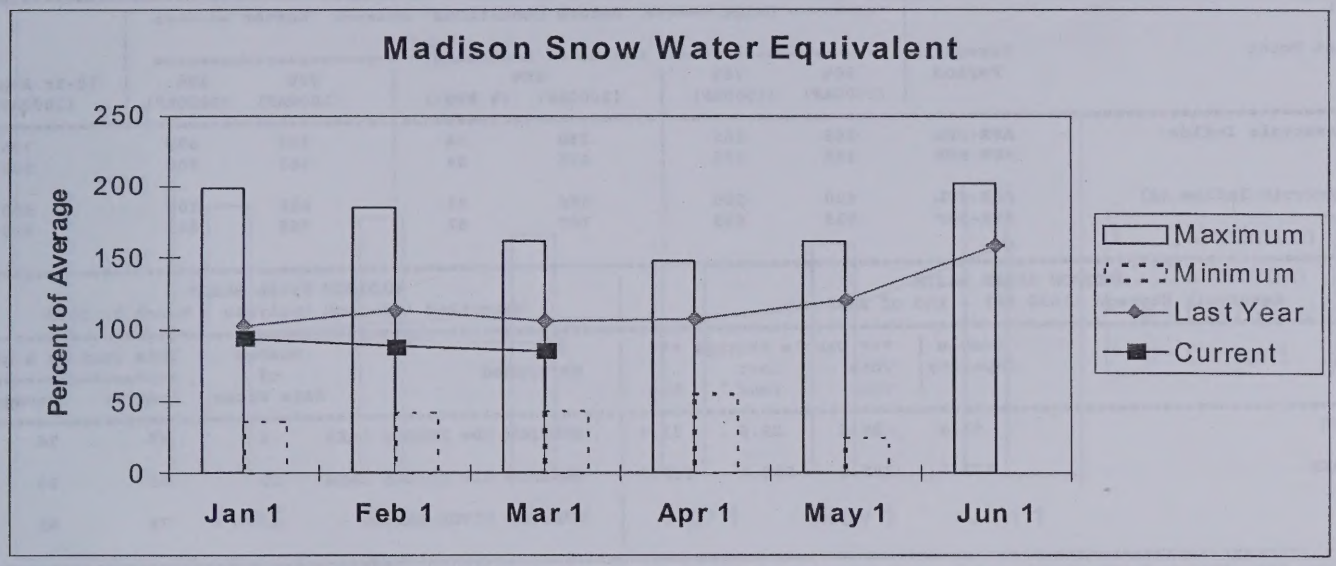
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

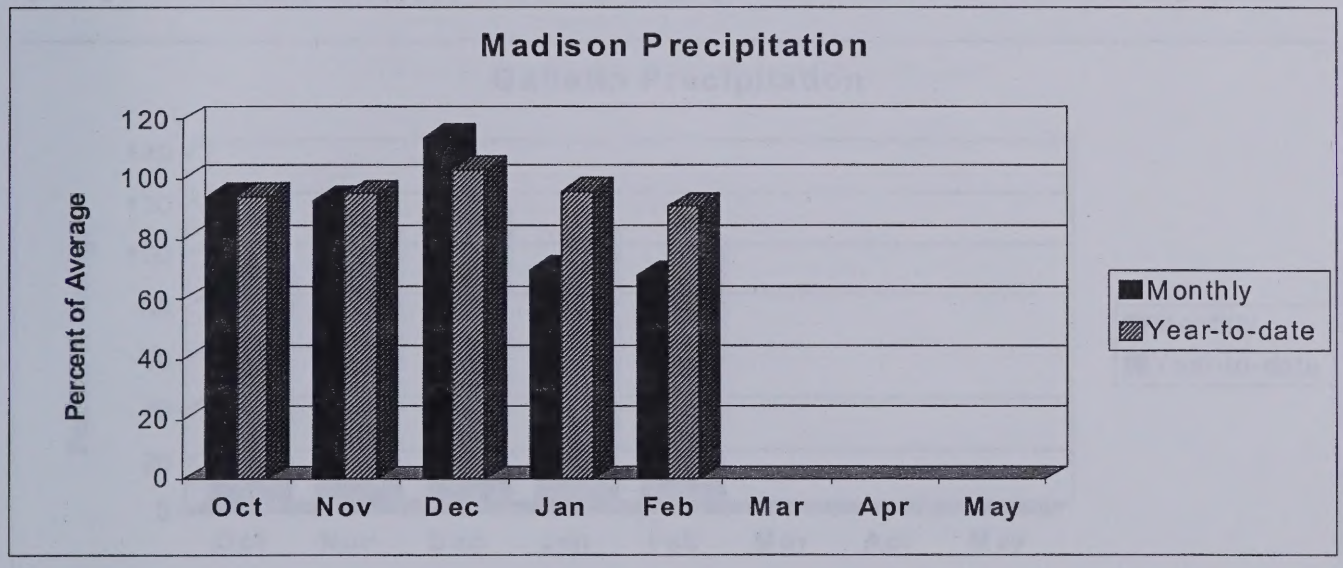
Madison River Basin

Snowpack conditions in the Madison River Basin were below average and decreased 3 percent from February 1. February seasonal snow water gain was 65 percent of average. Snow water content was 85 percent of average and 78 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1997 and minimum was in 1977; March maximum swe was in 1997 and minimum was in 1977; April maximum swe was in 1997 and minimum was in 1977; May maximum swe was in 1997 and minimum swe was in 1977; and June maximum swe was in 1995 and minimum in 2001. Average is for the period 1971 through 2000.

Mountain and valley precipitation during February was 68 percent of average and 66 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 91 percent of average and 76 percent of last year.



Ennis Lake storage was 94 percent of average and 100 percent of last year and Hebgen Lake storage was 108 percent of average and 102 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 76 percent to 83 percent.

Surface Water Supply Index (SWSI) was -0.9 for the Madison River.

MADISON RIVER BASIN

Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HEBGEN Reservoir Inflow	APR-JUL	265	305	330	84	355	395	395
	APR-SEP	345	395	425	84	455	505	505
ENNIS Reservoir Inflow (2)	APR-JUL	420	505	560	82	615	700	680
	APR-SEP	535	635	700	82	765	865	850

MADISON RIVER BASIN

Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ENNIS LAKE	41.0	29.6	29.6	31.4
HEBGEN LAKE	377.5	285.8	279.4	265.2

MADISON RIVER BASIN

Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
MADISON abv HEBGEN LAKE	6	68	76
MADISON blw HEBGEN LAKE	12	86	90
MADISON RIVER BASIN	18	78	85

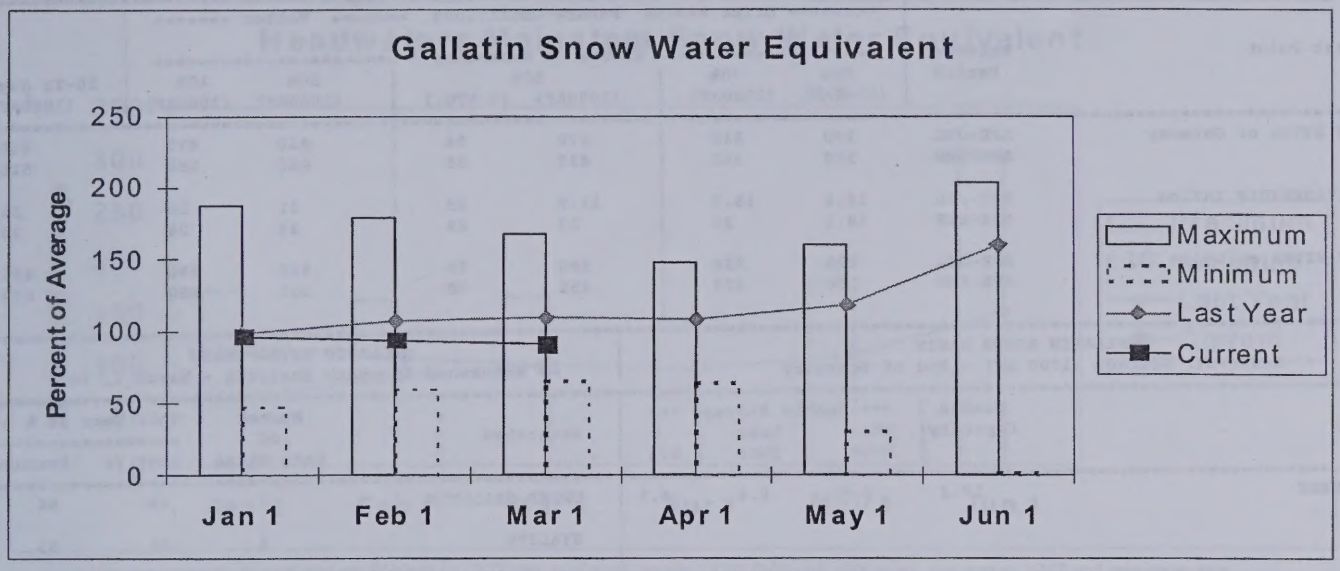
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

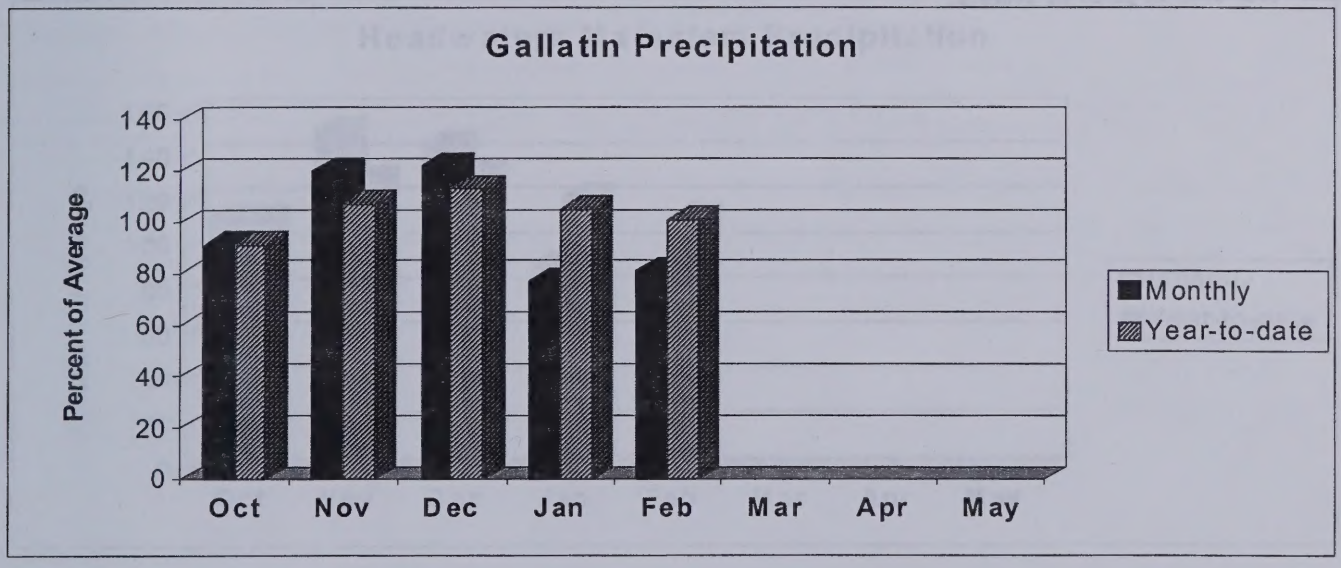
Gallatin River Basin

Snowpack conditions in the Gallatin River Basin were slightly below average and decreased 3 percent from February 1. February seasonal snow water gain was 80 percent of average. Snow water content was 91 percent of average and 83 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1966; February maximum swe was in 1997 and minimum was in 1977; March maximum swe was in 1997 and minimum was in 1977, 1987 and 2005; April maximum swe was in 1997 and minimum was in 2001; May maximum swe was in 1970 and minimum swe was in 1987; and June maximum swe was in 1975 and minimum in 2001. Average is for the period 1971 through 2000.

Mountain precipitation during February was 81 percent of average and 69 percent of last year. Valley precipitation during February was 48 percent of average and 96 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 101 percent of average and 87 percent of last year.



Middle Creek storage was 144 percent of average and 102 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 74 percent to 84 percent.

Surface Water Supply Index (SWSI) was -0.7 for the Gallatin River.

GALLATIN RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GALLATIN RIVER nr Gateway	APR-JUL	270	330	370	84	410	470	440
	APR-SEP	320	390	435	85	480	550	515
HYALITE RESERVOIR Inflow	APR-JUL	15.8	18.0	19.5	89	21	23	22
	APR-SEP	18.1	20	22	88	24	26	25
GALLATIN RIVER at Logan (2)	APR-JUL	220	320	390	79	460	560	495
	APR-SEP	260	375	455	80	535	650	570

GALLATIN RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MIDDLE CREEK	10.2	6.5	6.4	4.5

GALLATIN RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER GALLATIN	7	84	96
HYALITE	4	84	83
BRIDGER	2	81	82
GALLATIN RIVER BASIN	13	83	91

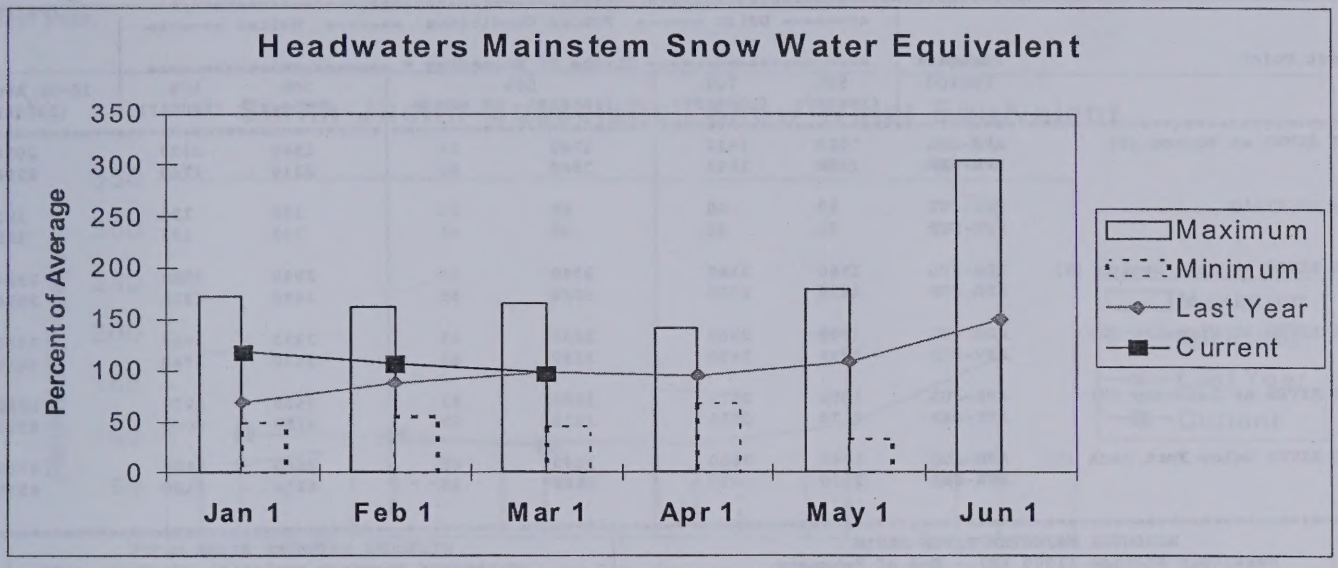
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

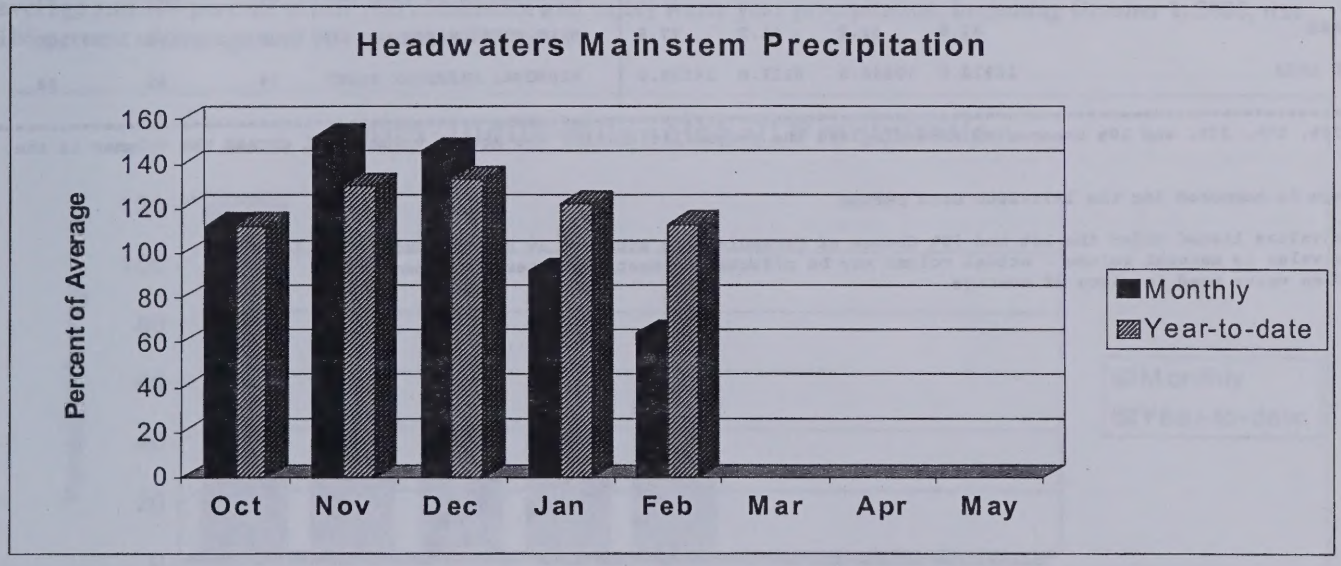
Missouri Mainstem River Basin

Snowpack conditions in the Headwaters Missouri Mainstem River Basin were near average and decreased 9 percent from February 1. February seasonal snow water gain was 69 percent of average. Snow water content was 97 percent of average and 100 percent of last year.



January maximum swe was established in 1997 and minimum swe in 1977; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe in 1972 and minimum swe was in 1977; April maximum swe was in 1972 and minimum swe was in 1961, 1966, and 2005; May maximum swe was in 1975 and minimum swe was in 1977; and June maximum swe was in 1975 and minimum swe was in 1992. Average is for the period 1971 through 2000.

Mountain precipitation during February was 69 percent of average and 57 percent of last year. Valley precipitation during February was 54 percent of average and 61 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 113 percent of average and 121 percent of last year.



Canyon Ferry Lake storage was 102 percent of average and 110 percent of last year; Helena Valley storage was 120 percent of average and 98 percent of last year; Lake Helena storage was 81 percent of average and 100 percent of last year; Hauser & Helena storage was 117 percent of average and 99 percent of last year; Holter Lake storage was 103 percent of average and 99 percent of last year; and Fort Peck Lake storage was 72 percent of average and 121 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 67 percent to 81 percent.

Surface Water Supply Index (SWSI) was 0.0 in the Missouri River above Canyon Ferry; +0.1 in the Missouri River below Canyon Ferry; +0.4 in the Missouri River above Fort Peck; and -2.4 in the Missouri River below Fort Peck.

MISSOURI MAINSTEM RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
MISSOURI RIVER at Toston (2)	APR-JUL	1010	1420	1700	83	1980	2390	2050
	APR-SEP	1200	1650	1980	83	2310	2760	2390
DEARBORN nr Craig	APR-JUL	32	60	80	66	100	128	121
	APR-SEP	31	61	82	66	103	133	125
MISSOURI RIVER at Fort Benton (2)	APR-JUL	1560	2140	2540	85	2940	3520	2990
	APR-SEP	1830	2550	3020	85	3490	4210	3570
MISSOURI RIVER at Virgelle (2)	APR-JUL	1730	2400	2860	83	3320	3990	3450
	APR-SEP	2040	2850	3390	84	3930	4740	4060
MISSOURI RIVER nr Landusky (2)	APR-JUL	1850	2570	3060	83	3550	4270	3690
	APR-SEP	2170	3030	3610	83	4190	5060	4350
MISSOURI RIVER below Fort Peck (2)	APR-JUL	1960	2680	3180	85	3680	4400	3740
	APR-SEP	2220	3090	3660	85	4230	5100	4330

MISSOURI MAINSTEM RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CANYON FERRY LAKE	2043.0	1543.0	1409.0	1509.4
HELENA VALLEY	9.2	4.8	4.9	4.0
LAKE HELENA	12.7	10.8	10.9	13.4
HAUSER & HELENA	74.6	73.4	74.0	63.0
HOLTER LAKE	81.9	80.2	81.2	77.6
FORT PECK LAKE	18910.0	10640.0	8817.0	14728.0

MISSOURI MAINSTEM RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
HEADWATERS MAINSTEM	9	100	97
SMITH-JUDITH-MUSSELSHELL	14	100	91
SUN-TETON-MARIAS	14	67	73
MAINSTEM ab FT PECK RES	36	85	83
MILK RIVER BASIN	9	90	100
MISSOURI MAINSTEM BASIN	44	85	84

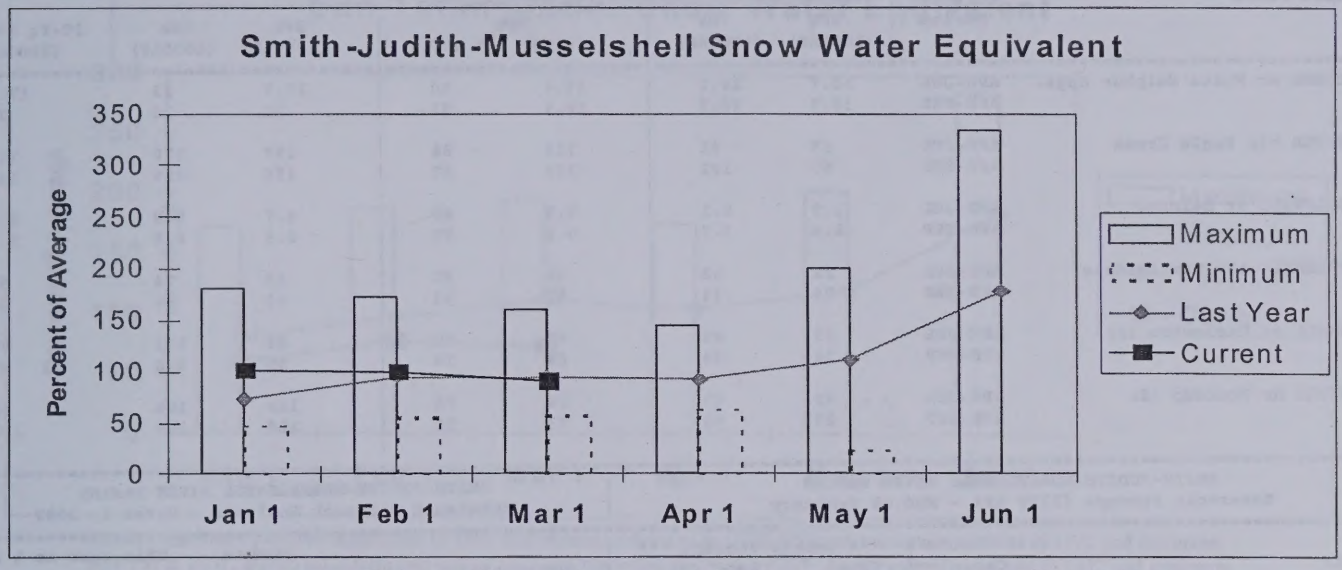
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

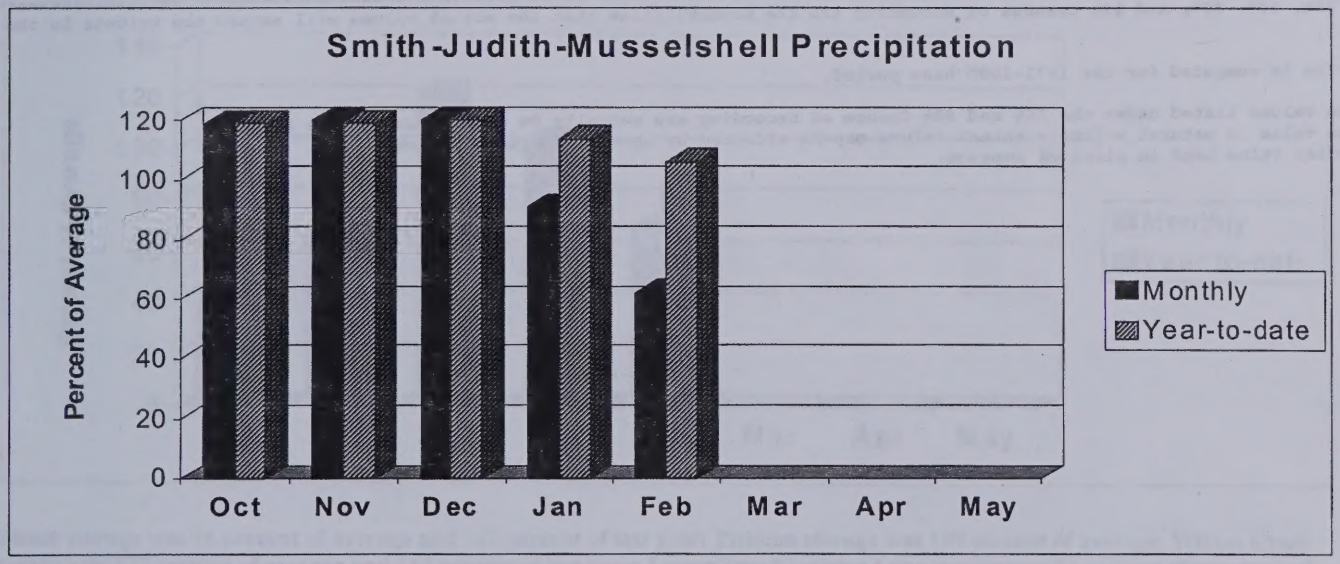
Smith-Judith-Musselshell River Basins

Snowpack conditions in the Smith-Judith-Musselshell River Basins were slightly below average and decreased 9 percent from February 1. February seasonal snow water gain was 79 percent of average. Snow water content in the Smith River Basin was 93 percent of average and 96 percent of last year; in the Judith River Basin was 90 percent of average and 99 percent of last year; and in the Musselshell River Basin was 84 percent of average and 118 percent of last year.



January maximum swe was established in 1997 and minimum swe in 1988; February maximum swe was in 1978 and minimum swe was in 1987; March maximum swe was in 1978 and minimum swe was in 1987 and 2005; April maximum swe was in 1970 and minimum swe was in 1992; and May maximum swe was in 1970 and minimum swe was in 1987; and June maximum swe was in 1967 and minimum swe was in 1987, 1992, 1994, and 2001. Average is for the period 1971 through 2000.

Mountain and valley precipitation during February in the Smith-Belts was 59 percent of average and 52 percent of last year; in the Judith was 57 percent of average and 47 percent of last year; and in the Musselshell was 80 percent of average and 100 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 106 percent of average and 104 percent of last year.



Smith River storage was 111 percent of average and 143 percent of last year; Ackley Lake was 47 percent of average and 68 percent of last year; Bair storage was 60 percent of average and 150 percent of last year; Martinsdale storage was 67 percent of average; and Deadman's Basin was 92 percent of average and 175 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 65 percent to 86 percent.

Surface Water Supply Index (SWSI) was -0.1 in the Smith River; +0.8 in the Upper Judith River; and +0.3 in the Musselshell River.

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SHEEP CREEK nr White Sulphur Spgs.	APR-JUL	10.7	14.1	16.4	96	18.7	22	17.1
	APR-SEP	12.7	16.7	19.4	97	22	26	20
SMITH RIVER blw Eagle Creek	APR-JUL	58	91	114	86	137	170	133
	APR-SEP	63	102	129	87	156	195	149
NF MUSSELSHELL nr Delpine	APR-JUL	1.9	3.1	3.9	85	4.7	5.9	4.6
	APR-SEP	2.4	3.7	4.6	85	5.5	6.8	5.4
SF MUSSELSHELL abv Martinsdale	APR-JUL	22	38	48	92	58	74	52
	APR-SEP	24	41	52	93	63	80	56
MUSSELSHELL at Harlowton (2)	APR-JUL	25	40	63	82	86	121	77
	APR-SEP	26	39	64	79	89	126	81
MUSSELSHELL nr Roundup (2)	APR-JUL	30	47	74	75	119	185	99
	APR-SEP	29	45	73	72	118	184	102

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
SMITH RIVER	10.6	7.3	5.1	6.6
ACKLEY LAKE	7.0	1.5	2.2	3.2
BAIR	7.0	2.4	1.6	4.0
MARTINSDALE	23.1	6.8	0.0	10.2
DEADMAN'S BASIN	72.2	45.7	26.1	49.8

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SMITH	8	96	93
HIGHWOOD	0	72	0
JUDITH	6	99	90
MUSSELSHELL	5	118	84
SMITH-JUDITH-MUSSELSHELL	14	100	91

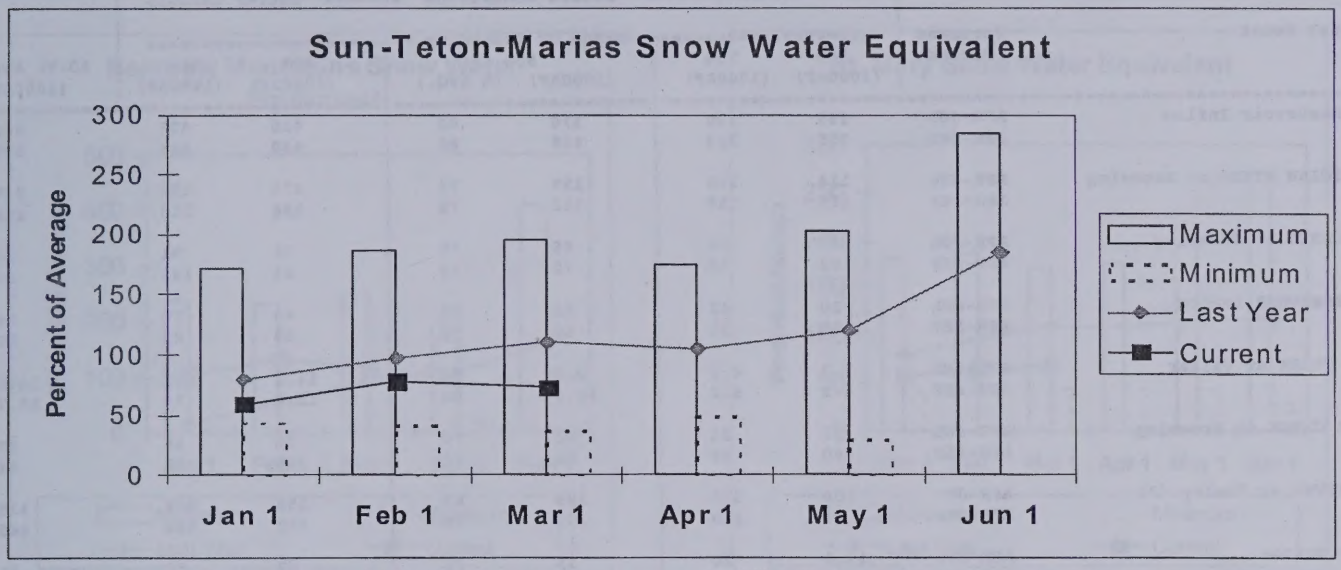
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

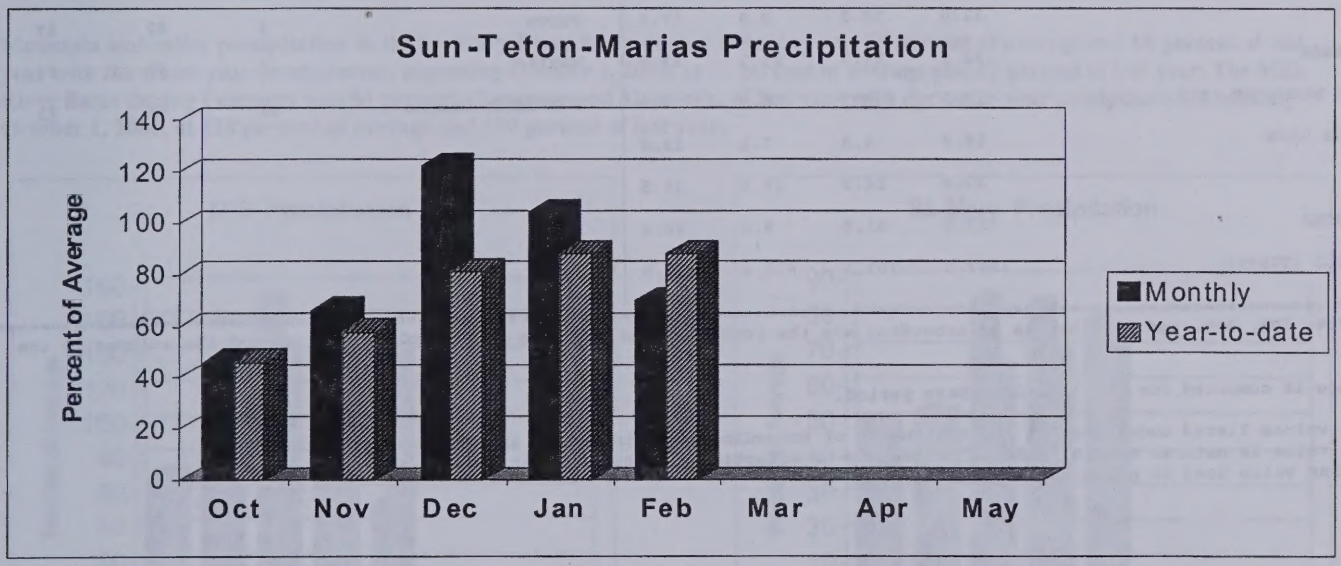
Sun-Teton-Marias River Basins

Snowpack conditions in the Sun-Teton-Marias River Basins were below average, ninth lowest of record, and decreased 5 percent from February 1. February seasonal snow water gain was 76 percent of average. Snow water content in the Sun River Basin was 82 percent of average and 73 percent of last year; in the Teton River Basin was 67 percent of average, 62 percent of last year, and eighth lowest of record; and in the Marias River Basin was 67 percent of average, 63 percent of last year, and sixth lowest of record.



January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1972 and minimum swe was in 2001; March maximum swe was in 1972 and minimum swe was in 2005; April maximum swe was in 1972 and minimum swe was in 2005; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum was in 1972 and minimum swe was in 1987, 1992, and 1998. Average is for the period 1971 through 2000.

Mountain and valley precipitation during February in the Sun was 45 percent of average and 33 percent of last year; in the Teton was 74 percent of average and 46 percent of last year; and in the Marias was 72 percent of average and 59 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 88 percent of average and 80 percent of last year.



Gibson storage was 76 percent of average and 162 percent of last year; Pishkun storage was 109 percent of average; Willow Creek storage was 123 percent of average and 117 percent of last year; Lower Two Medicine Lake storage was 71 percent of average and 91 percent of last year; Four Horns Lake storage was 40 percent of average and 68 percent of last year; Swift storage was 90 percent of average and 106 percent of last year; Lake Frances storage was 91 percent of average and 635 percent of last year; and Lake Elwell (Tiber) storage was 111 percent of average and 113 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 57 percent to 74 percent.

Surface Water Supply Index (SWSI) was -0.4 in the Sun River; +0.2 in the Teton River; -1.3 in the Birch/Dupuyer Creeks; and -1.3 in the Marias River above Tiber Reservoir; and -1.3 in the Marias River below Tiber Reservoir.

SUN-TETON-MARIAS RIVER BASINS
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GIBSON Reservoir Inflow	APR-JUL	265	330	370	80	410	475	460
	APR-SEP	295	360	405	80	450	515	505
TWO MEDICINE RIVER nr Browning	APR-JUL	114	140	157	77	174	200	205
	APR-SEP	123	150	168	78	186	215	215
BADGER CREEK nr Browning	APR-JUL	39	54	65	76	76	91	86
	APR-SEP	43	60	72	76	84	101	95
SWIFT RESERVOIR Inflow	APR-JUL	30	42	50	78	58	70	64
	APR-SEP	38	51	60	78	69	82	77
DUPUYER CREEK nr Valier	APR-JUL	3.7	4.3	9.2	66	14.1	21	14.0
	APR-SEP	4.2	5.0	10.4	66	15.8	24	15.7
CUT BANK CREEK nr Browning	APR-JUL	37	51	61	79	71	85	77
	APR-SEP	40	56	66	79	76	92	84
MARIAS RIVER nr Shelby (2)	APR-JUL	106	215	285	69	355	465	415
	APR-SEP	98	210	290	66	370	480	440
TETON nr Dutton	APR-JUL	13.2	20	33	65	52	80	51
	APR-SEP	15.3	23	38	64	59	89	59

SUN-TETON-MARIAS RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GIBSON	99.1	37.7	23.3	49.7
PISHKUN	32.0	19.2	0.0	17.6
WILLOW CREEK	32.2	28.2	24.1	23.0
LOWER TWO MEDICINE LAKE	11.9	6.3	6.9	8.9
FOUR HORNS LAKE	19.2	4.8	7.1	12.0
SWIFT	30.0	14.9	14.1	16.5
LAKE FRANCES	112.0	61.0	9.6	66.8
LAKE ELWELL (TIBER)	1347.0	702.4	622.6	631.9

SUN-TETON-MARIAS RIVER BASINS
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SUN	7	73	82
TETON	4	62	67
MARIAS	6	63	67
SUN-TETON-MARIAS	14	67	73

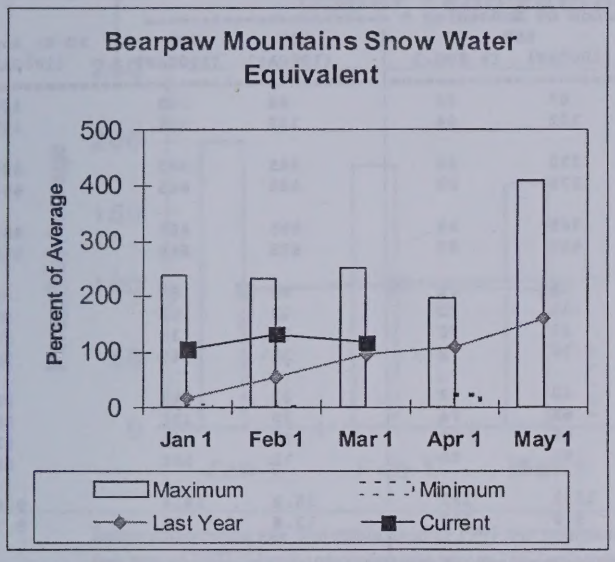
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

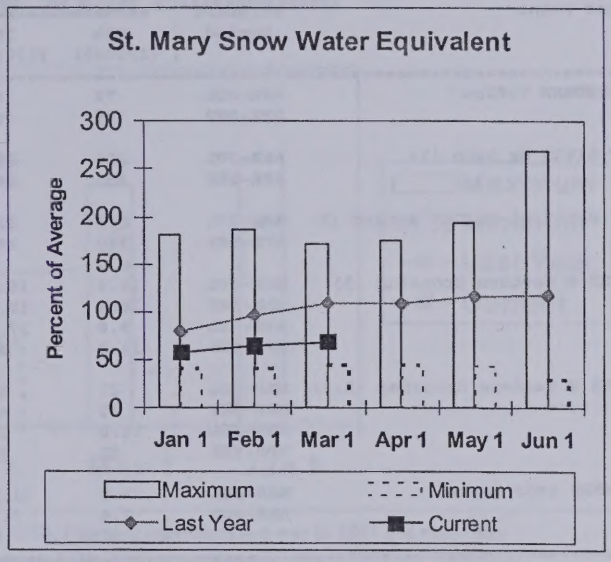
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

St. Mary and Milk River Basins

Snowpack conditions in the St. Mary and Milk River Basins were below average and decreased 17 percent from February 1. St. Mary February seasonal snow water gain was 89 percent of average. Snow water content in the St. Mary River Basin was 69 percent of average and 63 percent of last year and increased 4 percent from February 1. The Bearpaw Mountains were 117 percent of average and 123 percent of last year and decreased 14 percent from February 1. The Cypress Hills in Canada were 88 percent of average and 71 percent of last.

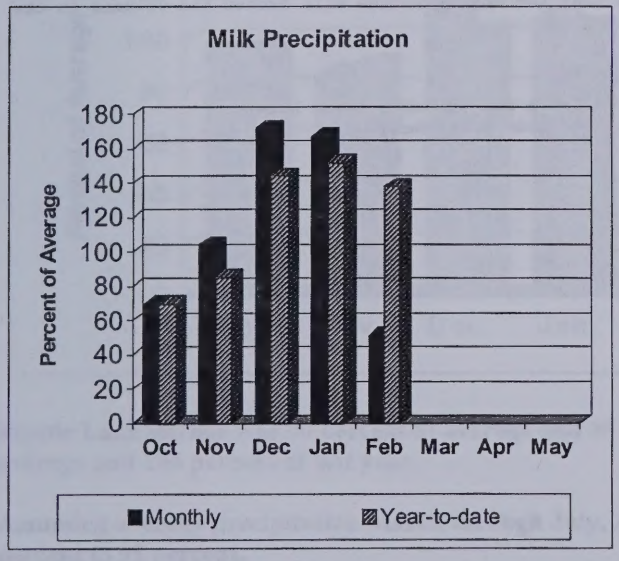


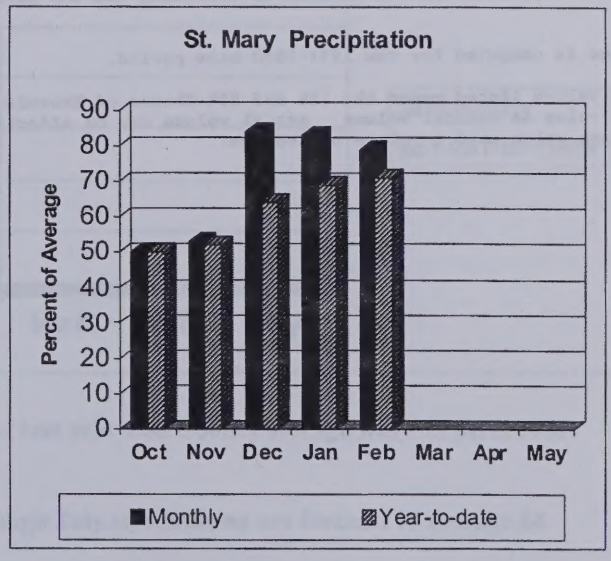


Bearpaw - January maximum swe was established in 1978 and minimum swe was in 1981; February maximum swe was 1978 and minimum was in 1973; March maximum swe was 1978 and minimum swe was 2005; April maximum swe was in 1985 and minimum swe was in 1973, 1983, and 1986; May maximum swe was 1975 and the minimum, 0.0, has occurred in several years. Average is for the period 1971 through 2000.

St. Mary - January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1972 and minimum swe was in 2001; March maximum swe was in 1972 and minimum swe was in 2005; April maximum swe was in 1967 and 1972 and minimum swe was in 2005; May maximum swe was in 19972 and minimum swe was in 1977; and June maximum swe was in 1972 and minimum swe was 1992. Average is for the period 1971 through 2000.

Mountain and valley precipitation in the St. Mary River Basin during February was 79 percent of average and 60 percent of last year with the water year precipitation, beginning October 1, 2008, at 71 percent of average and 67 percent of last year. The Milk River Basin during February was 51 percent of average and 32 percent of last year with the water year precipitation, beginning October 1, 2008, at 138 percent of average and 190 percent of last year.





Lake Sherburne storage was 162 percent of average and 211 percent of last year; Fresno storage was 93 percent of average and 169 percent of last year; Beaver Creek storage was not available; and Nelson storage was 115 percent of average and 127 percent of last year.

Assuming average precipitation March through July, April through July streamflows in the St. Mary are forecast to average 76 percent to 83 percent and in the Milk are forecast to average 68 percent to 93 percent.

Surface Water Supply Index (SWSI) was -1.1 in the St. Mary River and -0.1 in the Milk River.

ST. MARY and MILK RIVER BASINS
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
LAKE SHERBURNE Inflow	APR-JUL	72	81	87	83	93	102	105
	APR-SEP	85	95	102	84	109	119	122
ST. MARY RIVER nr Babb (2)	APR-JUL	255	295	320	83	345	385	385
	APR-SEP	305	345	375	83	405	445	450
ST. MARY RIVER at US/CAN Border (2)	APR-JUL	265	325	365	84	405	465	435
	APR-SEP	330	395	435	85	475	540	515
MILK RIVER @ Western Crossing (3)	MAR-JUL	10.3	18.0	29	71	40	53	41
	MAR-SEP	10.7	19.0	31	72	43	58	43
	APR-JUL	9.6	17.6	23	70	28	36	33
	APR-SEP	11.2	20	26	72	32	41	36
MILK RIVER @ Eastern Crossing (2,3)	MAR-JUL	21	37	60	72	82	111	83
	MAR-SEP	22	40	65	74	90	121	88
	APR-JUL	18.0	27	45	74	63	90	61
	APR-SEP	22	35	54	78	73	101	69
BEAVER CREEK near Havre	MAR-JUL	7.8	11.0	13.1	137	15.2	18.4	9.6
	APR-JUL	3.4	6.1	9.0	103	13.4	24	8.7

ST. MARY and MILK RIVER BASINS
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LAKE SHERBURNE	64.3	46.2	21.9	28.6
FRESNO	127.0	48.2	28.5	52.0
BEAVER CREEK		NO REPORT		
NELSON	66.8	38.1	30.1	33.1

ST. MARY and MILK RIVER BASINS
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
ST. MARY	3	63	69
BEARPAW MOUNTAINS	3	123	117
CYPRESS HILLS, CANADA	6	71	88
MILK RIVER BASIN	8	92	104
ST. MARY & MILK BASINS	12	71	79

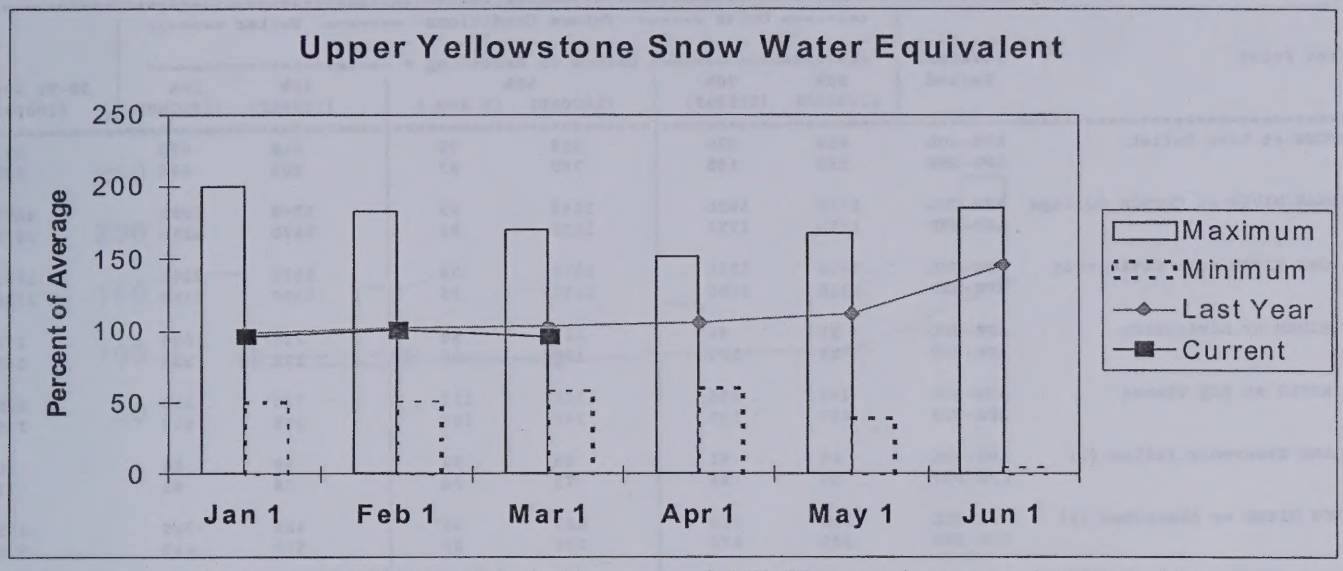
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

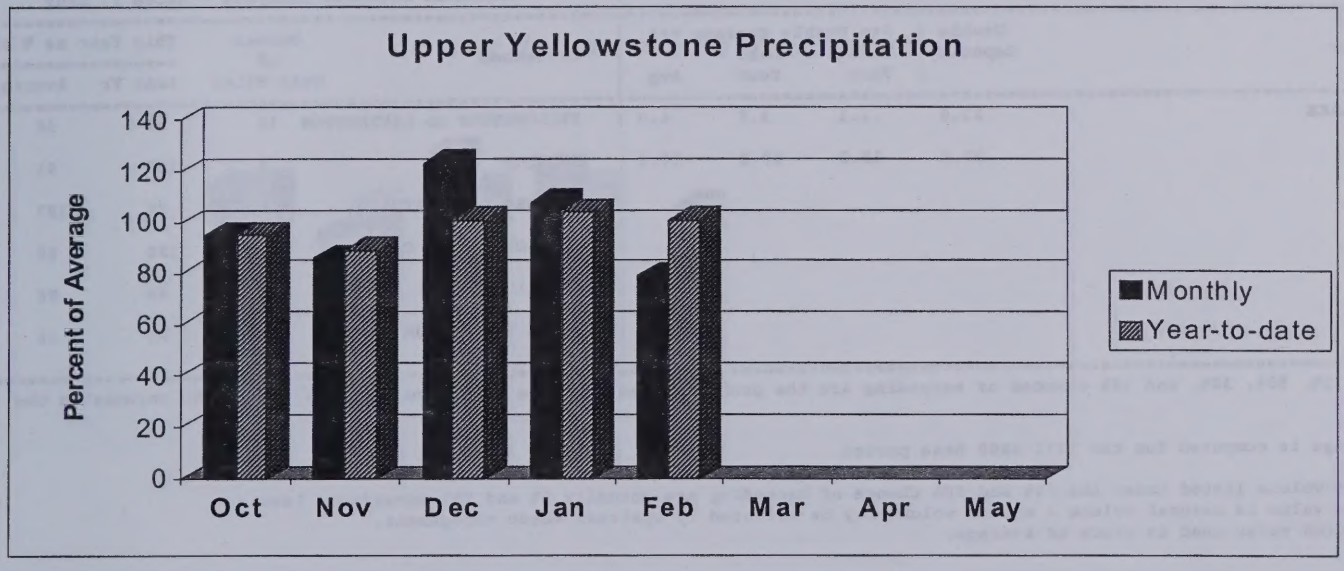
Upper Yellowstone River Basin

Snowpack conditions in the Upper Yellowstone River Basin were near average and decreased 5 percent from February 1. February seasonal snow water gain was 73 percent of average. Snow water content was 96 percent of average and 93 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1997 and minimum swe was in 2001; March maximum swe was in 1997 and minimum swe was in 2001; April maximum swe was in 1997 and minimum swe was in 2001; May maximum swe was in 1997 and minimum swe was in 1987; and June maximum swe was 1996 and minimum swe was in 2001. Average is for the period 1971 through 2000.

Mountain precipitation during February was 78 percent of average and 69 percent of last year. Valley precipitation during February was 85 percent of average and 288 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 101 percent of average and 90 percent of last year.



Mystic Lake storage was 90 percent of average and 95 percent of last year and Cooney storage was 105 percent of average and 106 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 84 percent to 95 percent.

Surface Water Supply Index (SWSI) was +0.6 in the Yellowstone River above Livingston; +0.3 in the Shields River; +2.2 in the Boulder River; -0.5 in the Stillwater River; -0.7 in the Rock/Red lodge Creeks; +0.7 in the Clarks Fork River; and +0.6 in the Yellowstone River above Bighorn River.

UPPER YELLOWSTONE RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
YELLOWSTONE at Lake Outlet	APR-JUL	450	520	565	96	610	680	590
	APR-SEP	595	685	745	93	805	895	805
YELLOWSTONE RIVER at Corwin Springs	APR-JUL	1330	1520	1640	99	1760	1950	1650
	APR-SEP	1550	1770	1920	98	2070	2290	1970
YELLOWSTONE RIVER near Livingston	APR-JUL	1480	1710	1870	98	2030	2260	1900
	APR-SEP	1730	2000	2190	96	2380	2650	2280
SHIELDS RIVER nr Livingston	APR-JUL	51	96	127	88	158	205	145
	APR-SEP	53	104	138	85	172	225	162
BOULDER RIVER at Big Timber	APR-JUL	240	285	315	111	345	390	285
	APR-SEP	255	305	340	108	375	425	315
MYSTIC LAKE Reservoir Inflow (2)	APR-JUL	46	51	55	92	59	64	60
	APR-SEP	59	66	71	92	76	83	77
STILLWATER RIVER nr Absarokee (2)	APR-JUL	335	395	440	89	485	545	495
	APR-SEP	395	470	520	89	570	645	585
CLARKS FORK RIVER nr Belfry	APR-JUL	390	450	490	91	530	590	540
	APR-SEP	425	490	535	90	580	645	595
COONEY RESERVOIR Inflow (2)	APR-JUL	24	34	40	85	46	56	47
	APR-SEP	30	41	48	84	55	66	57
YELLOWSTONE RIVER at Billings (2)	APR-JUL	2580	3050	3370	96	3690	4160	3510
	APR-SEP	2860	3560	3940	96	4320	5020	4120

UPPER YELLOWSTONE RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MYSTIC LAKE	21.0	2.1	3.6	4.0
COONEY	27.4	19.3	17.2	16.4

UPPER YELLOWSTONE RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
YELLOWSTONE ab LIVINGSTON	18	88	96
SHIELDS	4	103	91
BOULDER-STILLWATER	4	98	107
RED LODGE-ROCK CREEK	7	120	89
CLARK'S FORK	7	89	96
UPPER YELLOWSTONE BASIN	36	93	96

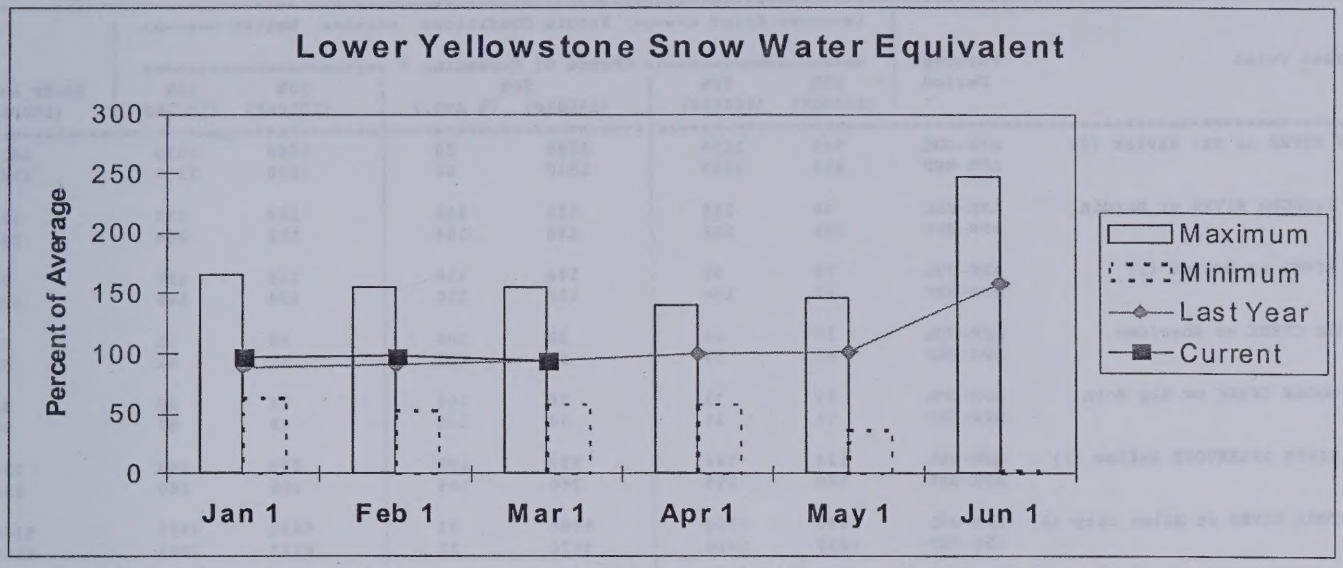
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

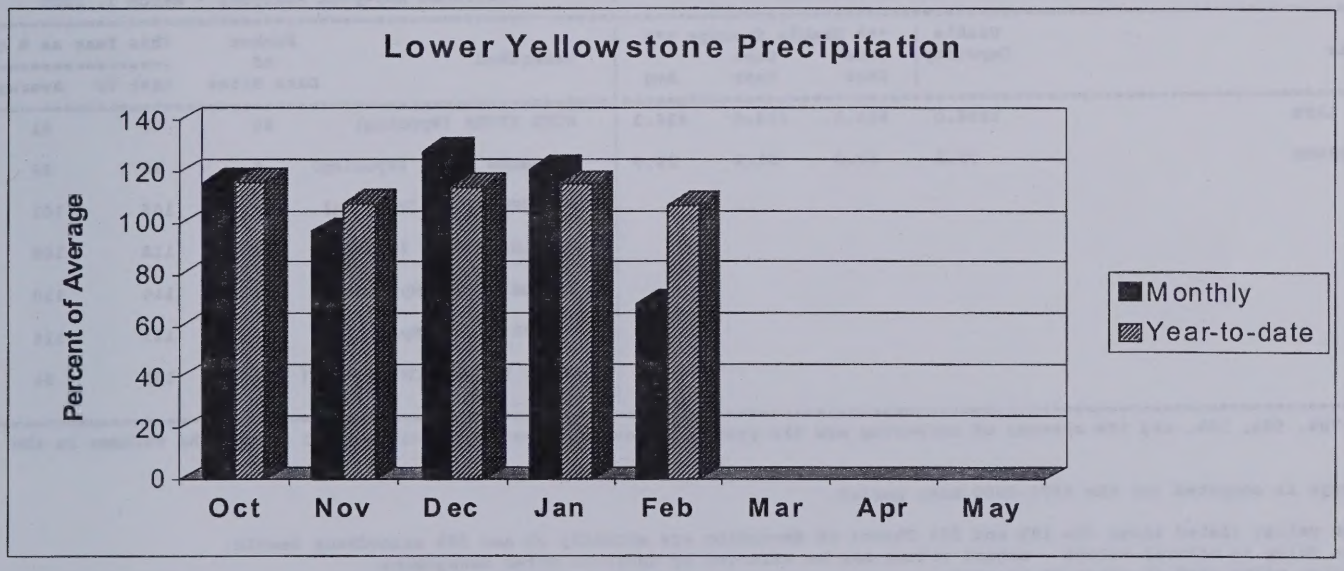
Lower Yellowstone River Basin

Snowpack conditions in the Lower Yellowstone River Basin were slightly below average and decreased 6 percent from February 1. February seasonal snow water gain was 57 percent of average. Snow water content was 94 percent of average and 101 percent of last year.



January maximum swe was established in 1997 and minimum swe was in 2000; February maximum swe was in 1997 and minimum swe was in 2001; March maximum swe was in 1986 and minimum swe was in 2001; April maximum swe was in 1986 and minimum swe was in 2001; May maximum swe was in 1997 and minimum swe was in 1981; and June maximum swe was in 1995 and minimum swe was in 2001. Average is for the period 1971 through 2000.

Mountain and valley precipitation during February was 69 percent of average and 67 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2008, was 107 percent of average and 100 percent of last year.



Bighorn Lake storage was 112 percent of average and 110 percent of last year and Tongue River storage was 244 percent of average and 117 percent of last year.

Assuming average precipitation March through July, April through July streamflows are forecast to average 85 percent to 103 percent.

Surface Water Supply Index (SWSI) was +0.3 in the Bighorn River below Bighorn Lake; +1.1 in the Little Bighorn River; +0.5 in the Yellowstone River below Bighorn River; +2.4 in the Tongue River; and +2.0 in the Powder River.

LOWER YELLOWSTONE RIVER BASIN
Streamflow Forecasts - March 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIGHORN RIVER nr St. Xavier (2)	APR-JUL	745	1120	1380	86	1640	2010	1610
	APR-SEP	910	1220	1510	86	1800	2110	1760
LITTLE BIGHORN RIVER nr Hardin	APR-JUL	86	114	133	104	152	180	128
	APR-SEP	100	129	150	104	171	200	144
TONGUE RIVER nr Dayton (2)	APR-JUL	75	93	106	110	119	137	96
	APR-SEP	91	106	120	110	134	149	109
BIG GOOSE CREEK nr Sheridan	APR-JUL	33	44	52	100	60	71	52
	APR-SEP	41	53	61	102	69	81	60
LITTLE GOOSE CREEK nr Big Horn	APR-JUL	24	31	36	106	41	48	34
	APR-SEP	31	39	44	105	49	57	42
TONGUE RIVER RESERVOIR Inflow (2)	APR-JUL	120	186	230	105	275	340	220
	APR-SEP	160	215	260	104	305	360	250
YELLOWSTONE RIVER at Miles City (2)	APR-JUL	3470	4310	4880	91	5450	6290	5360
	APR-SEP	4050	5010	5670	91	6330	7290	6210
POWDER RIVER at Moorehead	APR-JUL	131	199	245	120	290	360	205
	APR-SEP	147	215	265	115	315	385	230
POWDER RIVER nr Locate	APR-JUL	140	220	275	117	330	410	235
	APR-SEP	156	245	305	117	365	450	260
YELLOWSTONE RIVER nr Sidney (2)	APR-JUL	3610	4560	5210	95	5860	6810	5480
	APR-SEP	4300	5170	5950	95	6730	7600	6280

LOWER YELLOWSTONE RIVER BASIN
Reservoir Storage (1000 AF) - End of February

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BIGHORN LAKE	1356.0	923.5	836.0	826.3
TONGUE RIVER	79.1	60.0	51.2	24.6

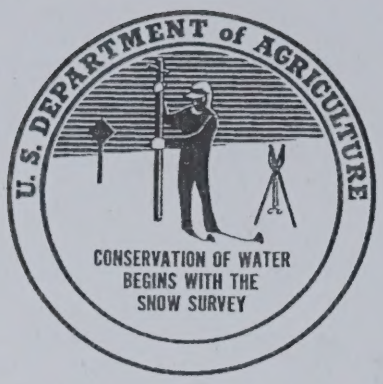
LOWER YELLOWSTONE RIVER BASIN
Watershed Snowpack Analysis - March 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WIND RIVER (Wyoming)	20	87	81
SHOSHONE RIVER (Wyoming)	6	96	89
BIGHORN RIVER (Wyoming)	20	106	101
LITTLE BIGHORN (Wyoming)	3	118	105
TONGUE RIVER (Wyoming)	10	114	110
POWDER RIVER (Wyoming)	9	113	114
LOWER YELLOWSTONE BASIN (	48	101	94

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.



Federal Building, Room 443
10 E. Babcock
Bozeman, MT 59715

Montana
Water Supply Outlook Report

Natural Resources Conservation Service
Bozeman, MT